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U. S. DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

ROYAL MEEKER, Commissioner

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OF THE

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MONTHLY REVIEW

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ANTHRAX AS AN OCCUPATIONAL DISEASE.

BY WM. H. RAND, M. D.

In man anthrax is almost exclusively of occupational origin. The newspapers occasionally chronicle the occurrence of the infection in workmen employed in tanneries or as packers, handlers and dressers of imported hides and hair, wool sorters, or as farm laborers. It is certain, however, that but a small percentage of the cases ever come to the knowledge of the general public.

In the Journal of the American Medical Association of December 4, 1915, a news item casually refers to "another death from anthrax," reported from Endicott, N. Y., the city bacteriologist of Binghamton confirming the diagnosis. This victim had been employed in an Endicott tannery, where, it is presumed, he became infected. No comment is made on this fatality, either editorially or by the correspondent sending the communication.

In all such cases specific data ought to be obtainable. Where did the hides come from? Had they been inspected by a State or Federal officer? Had they been subjected to any (and what) process of sterilization? If so, was the disinfection inadequate? Who was at fault in the matter? What penalty attaches to negligence in observing sanitary regulations as to anthrax? Are any prophylactic measures enforced by State or local boards of health for the protection of the workmen exposed to this contagion? These are some of the questions that demand full answer.

In some of the States anthrax is a reportable disease and should be made such by law everywhere. Probably no part of the country is exempt from the disease. The Bulletin of the Maine State Board of Health for January, 1916, reports, "In Maine cases of human anthrax have occasionally occurred among those who have handled hides which have come from places where this disease is prevalent."

At the annual meeting of the Delaware State Medical Society at Wilmington, October 11 and 12, 1915, Dr. John Palmer, jr., reported that, within the last eight years he had attended over 42 cases of anthrax affecting the cutaneous and cellular tissues. In the subsequent discussion, Dr. Bastian remarked that on account of the many morocco factories in Wilmington anthrax is much more common than in other parts of the country.[1] There is no indication in Dr. Palmer's report that any effort has been made to trace the infection to its source. But when one physician treats upwards of 40 cases of malignant pustule in the ordinary course of his practice within a period of eight years, it is evident that the local prevalence of the disease calls for sanitary intervention.

Many cases of anthrax have been found among workers in hides in New York City and among the workers in skins in Gloversville, N. Y. The sporadic and exceptional occurrence of the infection, however, has obscured its importance as an occupational disease.

The Bulletin of the New York State Industrial Commission for March, 1916, records the fact that since March, 1915, 11 cases of anthrax have been reported in the second inspection district and 11 in the metropolitan district. Of the number in the second district, 7 were tannery employees, 3 were farmers, and 1 a school boy; of the 11 infected, 4 died of anthrax. The metropolitan cases are to be made the subject of a special report and subsequently a general report embracing all the cases in the State will be submitted.

In Massachusetts, where occupational anthrax is subject to compensation under the workmen's compensation law, 6 cases, 2 of which were fatal, were reported during the year ending June 30, 1914. Of these, 3 were in tanneries (1 fatal) and 3 in water transportation (1 fatal).

In the biennial report of the Texas State Board of Health from September 1, 1912, to August 31, 1914, there were reported "14 human cases" of anthrax infection, with 3 deaths. Among animals 11,746 cases were reported, with 9,328 deaths. The epidemic appeared in 26 counties, while in 1913 there were only 17 infected counties. The board of health has sought to enlighten the people as to the danger of infection, and at the same time to check its extension by the distribution of anthrax vaccine. The conclusion announced by the board is that the extensive epidemics of anthrax in west Texas "are largely due to the horsefly, which carries the infection from the sick to the well."

In several European countries anthrax has long been classed as a reportable disease. It is noteworthy that wherever the law requires the infection to be reported there is always an apparent increase in the incidence of the disease in the early years of reporting. In Germany, for example, such a law became operative January 1, 1910.

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[1] Jour. Am. Med. Assn., Nov. 6, 1915, pp. 1670, 1671.

During that year, as a result of this enactment, 287 cases of anthrax, with 36 deaths, were discovered in the Empire.

In Great Britain, reports of industrial anthrax have been tabulated since 1900. These are shown in the following table:

CASES OF OCCUPATIONAL ANTHRAX REPORTED IN GREAT BRITAIN, 1900 TO 1914.

Year.	Cases reported.		Year.	Cases reported.	
	Total.	Fatal.		Total.	Fatal.
1900	37	7	1908	47	7
1901	39	10	1909	56	12
1902	38	9	1910	51	4
1903	47	12	1911	64	11
1904	50	10	1912	47	6
1905	59	18	1913	70	7
1906	67	21	1914	54	7
1907	58	11	Total	784	152

In France, returns for the years 1910 to 1912 indicate the total number of occupational-anthrax cases as follows:

1910	54 (39 males, 15 females).
1911	42 (35 males, 7 females).
1912	38 (29 males, 9 females).

According to the records of the Bavarian statistical bureau, between 1890 and 1911, 314 Bavarian workmen contracted the disease. Ninety-four of that number, or 30 per cent, died.

Most of the anthrax-infected material (hides, hair, bristles, wool, etc.) comes from countries that are far behind the times in respect to practical hygiene—Russia, Siberia, China, South America. Hence the proposition made by Chaveau to establish an international sanitary police system for the suppression of anthrax is not feasible, because the lands which constitute the source of this infection are the very countries that are not equipped to cooperate in the crusade.

For a similar reason the compulsory use of a preventive vaccine is impracticable in the regions from which the greater part of the infected raw material is exported. In France, however, the authorities have had recourse to prophylactic vaccination of all herds by officers of the Government. At first some of the cattle owners actively opposed this procedure. But they found that their unvaccinated animals died of anthrax, while a neighbor's vaccinated herd remained healthy, and this demonstration of the immunizing effect of the operation quickly put an end to opposition. It is said that in the three years, 1911 to 1913, 345,000 animals were inoculated with anthrax vaccine in France with complete success.[1]

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[1] Zentralblatt für gewerbehygiene, October, 1913, p. 477.

To institute any adequate measures for the disinfection of the hides obtained from infected sources is also difficult. The skins are cured by various methods. In many parts of South America they are merely dried; in South Africa and Morocco they are salted; and in the vicinity of Buenos Aires and Montevideo they are smeared on the flesh side with a paste of saltpeter, soda, or potash, with a little arsenic added as a protection against insects.

It is well known that anthrax spores when dry resist high temperatures; and they are said by Busson to have survived without nourishment for 17 years, retaining their virulence and infectivity unimpaired.[1] On account of this tenacity of life, the infective spores must be killed before the hides which they inhabit can be safely handled. For this destructive purpose, many chemical agents have been tried at various times and in different countries. Thus, Kuehl reported formalin a satisfactory disinfectant for hides.[2] Rambousek recommends a cresol preparation.[2] Holtzman reported success with a 1 per cent permanganate solution.[3] The Seymour-Jones process (formic acid and mercuric chloride) is said to have proved effective. One of the simplest methods of sterilizing hair and bristles is that devised by Dr. Ocabo, of Madrid—immersion in peptonized water at a temperature of 37° C. for 24 hours. In this medium, the spores germinate. Then, by boiling the maceration liquid, the spores are destroyed.[4] Becker reported success in killing the spores in infected hides with sodium sulphide solutions. Finally he experimented with ground mustard and reported that a 0.05 per cent solution "absolutely destroyed the spores in one hour." [5]

A fluid disinfectant called "Cyllin," said to be fifteen times as strong as carbolic acid but not poisonous, has acquired some repute in recent years as a means of destroying the anthrax spores. But Lange's experiments prove that Cyllin is not available as a substitute for steam sterilization of hair infected with anthrax. He finds that the 1 per cent Cyllin solution does not kill the anthrax spores, exposed to its action at house temperature, for 28 days.[6]

Devoto and Massarelli[7] reject as utopian many of the proposals which have been suggested for the suppression of the infection by sterilizing processes. They believe it possible to attain this end, however, by proper sanitation and personal hygiene.

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[1] Mitteil. des Inst. für Gewerbehg., 1911, No. 11, p. 12.

[2] Zentralblatt für Gewerbehygiene, April, 1914, p. 163.

[3] Idem., July, 1914, p. 279.

[4] Estudio del carbunco como enfermedad profesional y medios para evitar el contagio. (Madrid, 1912, p. 24.)

[5] Sozial-Technik, Supplement No. 7, 1911, p. 76.

[6] Zentralblatt für Gewerbehygiene, September, 1915, p. 221.

[7] Il Lavoro, July 15, 1914.

Dr. C. Ponder, the bacteriologist, in "Per la Lotta contro l'Infezione Carbonchiosa,"[1] observes that, while anthrax spores may retain their virulence indefinitely in the desiccated blood which adheres to the salted hides when they are packed and imported in a dried condition, no case of anthrax has ever been traced to skins salted and kept wet in transit.

Allusion has been made to the probability that many cases of anthrax occur in the United States which are never reported or recognized as such. Physicians who have but slight acquaintance with occupational diseases must almost inevitably fail to make a correct diagnosis when a case of malignant pustule comes under their observation. Accordingly, anthrax infection may often run its swift course to a fatal termination without identification.

Aside from the immunization of herds (when practicable) and the disinfection of hides, it is necessary also to employ all the resources of sanitation and hygiene to check the prevalence and the spread of the infection. Mechanical means have been extensively utilized in Prussia with this end in view. The use of machines for unfleshing hides and for the removal of wool and sheep pelts frees the workman from exposure to anthrax infection in processes which, when performed by hand, are attended with risk.

Workmen unavoidably subjected to the danger of infection should be instructed to refrain from handling hides, hair, bristles, wool, etc. (since these materials may harbor anthrax spores) whenever there is the slightest scratch or abrasion on their hands, arms, face, or neck, for epidermal lesions are the usual portals of entry for the infection. Any spot where the skin is broken should be painted with iodine.

By means of colored photographs the appearance of the anthrax pustule in its earliest stage of development may be made familiar to the workmen; so that, when a suspicious pimple shows itself anywhere on their bodies, it will be sure to receive immediate attention and treatment.

Within the past 10 years the antianthrax serum of Sclavo has won first place among medicaments in the treatment of anthrax and as a preventive of the disease. Throughout Italy and England it has a high repute among medical men.

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[1] Il Lavoro, Oct. 15, 1911, p. 302.

A NEW METHOD OF COMPUTING ACCIDENT RATES.[1]

The purpose of this article is to present for consideration and criticism a method adopted by the United States Bureau of Labor Statistics for showing the severity of industrial accidents in terms of the time lost per full-time worker on account of injuries sustained.

Accident statistics are in a most unsatisfactory state. In the United States, and in Europe, too, for that matter, they consist for the most part of figures giving the number of fatal and of nonfatal accidents by industries. The industry classifications are usually most unsatisfactory. Accident rates per thousand workers are seldom shown in the United States and when shown are almost worthless because no one can know what a "thousand workers" means. Rarely are the causes of accidents given with sufficient detail and explicitness to be of the slightest use in accident prevention or for any other purpose. Only in a very few establishments is the meaning of an accident rate clearly comprehended. In these few establishments accurate records are kept of the number of men employed and the hours worked by each. This makes possible the computation of the total number of man-hours worked by the establishment during the year—that is, the theoretical number of hours required by one man to turn out the year's work or, what amounts to the same thing, the theoretical number of men required to do this work in one hour. The number of hours workmen are exposed to the risk of industrial accidents is the true basis from which to measure accident rates, and not merely the total number of workmen employed. Accident rates heretofore have, with very few exceptions, given merely the crude number of injured per thousand employees, regardless of whether the establishments worked half time or full time—whether the average time worked per employee was 4 hours per day or 10 hours per day throughout the year. Furthermore, rates have been constructed on the assumption that all injuries are equal—that a broken back and a broken cuticle have the same importance in accident records.

To correct these defects in our industrial accident statistics, the United States Bureau of Labor Statistics in its studies of accidents in the machine-building industry and in the iron and steel industry has first ascertained from the time records the number of man-hours worked per annum in the establishments studied. The number of man-hours worked per annum is not an easily comprehensible or convenient base upon which to calculate accident rates. For convenience and greater clearness man-hours are converted into full-time workers. The full-time worker, as defined by the joint committee of the International Congress on Social Insurance and the International Institute of Statistics, is one who works 10 hours per day for 300 days per annum, or 3,000 hours per annum. The full-time worker may seem at first thought to be a mere statistical abstraction. It is true that the full-time worker, like the average man, is a unit of measure, not a living, breathing man, but for the purpose of accident statistics a standardized workman to serve as a unit of measure is absolutely essential. Furthermore, the statistical full-time workman who is assumed to work 10 hours a day for 300 days in the year conforms very closely in most industries to the actual workman who enjoys good health and works every day the establishment is running. Anyhow, accident rates should be stated in reference to a definite base number. The statement that the accident rate for 1915 in a given establishment was 72 per thousand employees is utterly indefinite and meaningless because (1) the number of employees varies from day to day, (2) the working-day varies in different plants all the way from 14 hours to 8 hours or less, (3) some plants operate 365 days in the year, others as low as 160 days, (4) the hours worked per day vary from season to season, and (5) both the hours per day and the days per year vary from year to year with fluctuations in industry. The only accurate method of calculating accident rates, then, is to ascertain the man-hours worked in a year and to convert man-hours into full-time workers by dividing by 3,000 hours. An accident rate of 117 per thousand full-time workers shows accurately the frequency of accidents in relation to the hours workers are exposed to the hazard of accident.

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[1] The system of assigning time losses for the computation of accident severity rates, here described, was first worked out by the U. S. Bureau of Labor Statistics in the early part of 1914, and was applied in the preparation of the group of charts exhibited at the Panama-Pacific International Exposition. As first used, the time allowances as fixed by the Wisconsin workmen's compensation act for specific injuries were employed. At the third annual safety congress of the National Safety Council, held in Chicago, Oct. 13–15, 1914 (Proceedings, pp. 133, 134), Mr. Dudley R. Kennedy, of the Youngstown Sheet & Tube Co., made suggestions along the same line, and, early in 1915, submitted to the National Safety Council a plan somewhat similar to the one described in this article. Mr. E. H. Downey, when chief statistician of the Wisconsin Industrial Commission, suggested, in January, 1915, a system of weighting for severity of injury, and this system was later applied to the accident statistics of Wisconsin in a bulletin issued Aug. 1, 1915.

By the method outlined above an accurate measure of the risk of accident occurrence or frequency is given. The rates so obtained may be called accident-frequency rates. The true measure of hazard in an industry, however, is not given by the mere number of accidents of all kinds per thousand full-time workers. To measure the true industrial hazard, a yardstick is needed which will show the economic losses resulting from injuries. The accident-frequency rates may be the same in two plants in the same industry, and the hazards may be entirely different because one plant has very few severe accidents, while the other has a large proportion of serious accidents. To put all industries and all plants on a common basis a system of computing accident rates must be devised which will take into account the difference in economic significance between the accident which bruises the workman's thumb and the accident which smashes his head.

Several methods of weighting accidents according to their importance suggest themselves at once. We may attempt to estimate the time loss, the wage loss, or the compensation paid. Of these the time loss is the most satisfactory. A day consists of 24 hours, and 7 days make a week the world over. Compensation awarded varies from State to State and wages vary from town to town and even from shop to shop in the same town. The days lost because of industrial injuries are then the best possible measure of the true hazards of industry—the burden imposed upon the community by industrial accidents. For temporary disabilities the time losses are matters of record. In the case of death and permanent disabilities the time losses must be estimated as accurately as possible. After study of all available information a table of time losses has been tentatively determined upon by the Bureau of Labor Statistics for injuries resulting in death, permanent total disability, and permanent partial disability.

FATALITIES.

In case of an injury causing death the time loss to the family and society is the expectancy of productive working life of the deceased workman. It is not possible to learn the age of all workmen killed in industrial accidents. The only alternative is to estimate the average age of workmen accidentally killed or totally disabled, by averaging the ages of killed and totally disabled workmen whose ages are known. Mr. E. H. Downey, special deputy in the insurance department of Pennsylvania, when statistician for the Industrial Commission of Wisconsin, calculated from information furnished to him that the average age of workmen killed and totally disabled in the industries of Wisconsin was about 30 years. Age statistics of victims of industrial accidents are meager. The ages of workmen killed and disabled in the iron and steel industry corroborates Mr. Downey's estimate, and other sources indicate that the average age of victims of fatal accidents is approximately 30 years. Even if later and more accurate statistics prove this estimate to be erroneous, it is better to accept it until it is proved to be incorrect, rather than to reject it. A quite imperfect method of calculating accident rates so as to show approximately the magnitude, seriousness, severity, or economic burden resulting therefrom is vastly preferable to a simple enumeration of accidents with no attempt to show the difference in consequences between major and minor injuries.

According to the American life tables, the life expectancy at age 30 is 35 years. This is for the population as a whole and is no doubt an underestimate. Workingmen exposed to all the hazards of illness and accident in industry have a shorter expectancy of life than the average for the whole population. The expected productive life of workers is even shorter than their life expectancy. Exact data are lacking, but in the light of all obtainable information it seems fair to estimate the working time lost on the average by relatives and the community for each workman killed by accident as 30 years, or 9,000 working-days, counting 300 working-days to the year. This is admittedly an estimate, and it may be too high or too low, but to count a fatality as 9,000 times more serious than an accident resulting in a disability of one day is assuredly more reasonable and more nearly in accordance with the facts than to count these two accidents as of equal importance in our accident statistics. A mathematically accurate measure of accidental death in terms of days lost is obviously impossible. It is also unimportant. The main thing is to get the best possible approximation and to apply it to existing accident statistics for the purpose of comparing the accident records of one year with another. Absolute accuracy is a matter of indifference; differentiation between fatal, serious, and minor accidents is absolutely essential. Almost any system of haphazard weighting of accidents is preferable to no weighting. Once a system of weighting is agreed upon, comparisons can be made of accident records, plant by plant, industry by industry, and year by year. For these comparisons it is the relative not the absolute time loss that is needful.

PERMANENT TOTAL DISABILITIES.

If the loss of working time to bereaved families and to the community were the sole thing to be shown in accident statistics, the same time loss should be fixed for permanent total disabilities as for fatalities. Permanent total disability is, however, a greater burden to relatives and the community than death. In recognition of this obvious fact the time loss for permanent total disability has been fixed at 35 years or 10,500 working-days. The relative importance or burdensomeness of permanent total disabilities as compared with fatalities is thus established rather arbitrarily. After further experience it may be advisable to change the relative weights. The system of weighting used does recognize, however "unscientifically," the undeniable fact that complete permanent incapacity of a worker is a greater burden than his death; and some recognition, even if unscientific, is better than ignoring the obvious facts. Until some better system of weighting is proposed the Bureau of Labor Statistics will use the time losses given above.

PERMANENT PARTIAL DISABILITIES.

A proper weighting for permanent partial disabilities in terms of days lost is even more difficult than for death and permanent total disabilities. Probably the nearest approach to the ideal method would be to calculate the per cent loss in earning power resulting from each specific permanent disability and multiply this per cent by 10,500 days, the time loss for permanent total disability, to get the time loss for the given disability. Needless to say such a calculation is impossible. An examination of the various compensation acts in existence, however, gives us a clue worth following in our quest for some method for estimating the severity of permanent partial disabilities in terms of days lost. All compensation acts agree in fixing the loss of an arm as the most serious injury less than total disability. Most compensation acts seem illiberal in granting compensation for permanent partial disabilities. The New York act is the most liberal and therefore more nearly adequate. It was taken as the basis for working out the time losses to be fixed for each specific disability. The New York act grants compensation for 312 weeks, or 1,872 working-days, for loss of an arm. This is only about 18 per cent of the time loss we have fixed for permanent total disability which seems clearly an underestimation of the seriousness of the loss of an arm relative to permanent total disability. Increasing the New York scale by 50 per cent gives 468 weeks, or 2,808 working-days, for loss of arm, which is about 31 per cent of the time loss fixed for death and 27 per cent of the time loss for permanent total disability. Twenty-seven per cent seems to represent fairly the degree of disability resulting from the loss of an arm relative to permanent total disability; therefore the New York scale for permanent partial disabilities was increased throughout by 50 per cent and adopted tentatively as the scale to be used by the Bureau of Labor Statistics in computing accident rates in terms of time lost. This accounts for the fact that the numbers giving the estimated days lost are expressed in units and not rounded off at tens or hundreds.

There is a surprising unanimity among the various compensation acts in the relation of compensation granted for loss of arm to that granted for other dismemberments. The scale of awards of almost any State would have given approximately the same relative importance to minor dismemberments compared to loss of arm. In the table below are given time losses for only such permanent disabilities as are included in the accident reports collected by the Bureau of Labor Statistics. Other disabilities can be rated according to the New York scale or any other scale as more complete reports are returned.

TEMPORARY DISABILITIES.

All disabilities from which recovery is complete are rated according to the actual number of workdays of incapacitation.

The following table brings together the time losses, in days, fixed for death and permanent disabilities:

TABLE OF TIME LOSSES FIXED FOR DEATH AND PERMANENT DISABILITIES.

	Time losses in days.	Per cent of loss of arm.
Death	9,000	
Permanent total disability	10,500	
Loss of members:		
Arm	2,808	100
Leg	2,592	92
Hand	2,196	78
Foot	1,845	66
Eye	1,152	41
Thumb	540	19
One joint of thumb	270	10
First finger	414	15
Second finger	270	10
Third finger	225	8
Fourth finger	135	5
Great toe	342	12
One joint of great toe	171	6

This schedule supplies a series of constants by which death and permanent injuries may be weighted in terms of a common unit—time lost in days—which is also the same unit as that used for measuring temporary disabilities. Multiplying the number of deaths and permanent disabilities by the time loss determined for each and adding the products to the days lost through temporary disabilities, we obtain a figure which represents the total days lost from injuries. Dividing this number representing total days lost by the number of full-time workers gives us as a quotient the average number of days lost per full-time worker. This last figure may be called the accident severity rate, since it shows the burdensomeness or seriousness of the accidents analyzed.

The whole process of working out the accident severity rate may be illustrated as follows: Plant A operated 4,200,000 man-hours in 1915, requiring 1,400 full-time (300-day, 10-hour-per-day) workers. During the year, 324 accidents occurred, resulting in 1 death and the loss of the following members: 2 arms, 1 foot, 5 thumbs, 25 first fingers, while the 290 temporary disabilities showed a time loss of 2,790 days. Applying the time losses in the above table to these data, the following results are obtained:

	Time loss (in days).	
	Per case.	Total.
1 death	9,000	9,000
2 arms	2,808	5,616
1 foot	1,845	1,845
5 thumbs	540	2,700
25 first fingers	414	10,350
290 temporary disabilities		2,790
Total		32,301

The total number of days lost, 32,301, divided by the number of full-time workers, 1,400, gives an average of 23 days per full-time worker. This is what is here called the accident severity rate, expressed in terms of days. The accident frequency rate for the same group would be 231 per 1,000 300-day workers.

The preceding paragraphs have explained very briefly the meaning of accident severity rates and the method by which they are obtained. The significance of such rates in their practical application is indicated in the two following illustrations:

In the table below comparison is made of the accident experience for a year of the iron and steel industry, as represented by a large plant, and of the machine-building industry, as represented by a group of plants. Frequency rates and severity rates are shown in parallel columns.

ACCIDENT RATES IN STEEL MANUFACTURE AND IN MACHINE BUILDING.

Industry.	Number of 300-day workers.	Accident frequency rates (per 1,000 300-day workers).				Accident severity rates (days lost per 300-day worker).			
		Death.	Permanent injury.	Temporary disability.	Total.	Death.	Permanent injury.	Temporary disability.	Total.
Iron and steel (1913).......	7,562	1.9	4.6	108.0	114.5	16.6	2.2	2.4	21.2
Machine building (1912)...	115,703	.3	3.6	114.1	118.0	2.9	1.6	1.1	5.6

Examination of the columns giving total frequency rates and total severity rates, shows that, on the basis of frequency, the machine-building plants were more hazardous than the steel plant—the respective rates being 118 as against 114.5 per thousand full-time workers. On the basis of severity, however, the steel industry was almost four times as hazardous as machine building—the days lost per full-time worker being 21.2 and 5.6, respectively. It is clear that as between these diametrically opposite showings of the relative hazards of the two industries, the severity rates offer a decidedly more accurate measure of true hazard. In machine building there is opportunity for many minor injuries, but the danger of serious injury is much less than in the steel industry. The severity rate brings out this fact.

The second illustration shows how, over a period of years, within the same establishment, accident severity rates may run counter to accident frequency rates. The next table gives data of this character. It shows the accident experience of a large steel plant over a period of four years. The plant is one in which the most serious attention has been devoted to the prevention of accidents.

ACCIDENT EXPERIENCE OF A LARGE STEEL PLANT, 1910 TO 1913.

	Number of 300-day workers.	Accident frequency rates (per 1,000 300-day workers).				Accident severity rates (days lost per 300-day worker).			
		Death.	Permanent injury.	Temporary disability.	Total.	Death.	Permanent injury.	Temporary disability.	Total.
1910	7,642	1.7	4.3	127.5	133.5	15.3	2.4	2.2	19.9
1911	5,774	1.6	3.6	106.6	111.8	14.1	2.1	2.4	18.6
1912	7,396	.7	6.5	146.3	153.5	6.0	5.5	2.8	14.3
1913	7,562	1.9	4.6	108.0	114.5	16.7	2.2	2.4	21.3

Limiting attention to the columns showing total rates, it will be noted that in 1910 the frequency rate was 133.5 per 1,000 300-day workers and the severity rate was 19.9 days lost per 300-day worker. The next year, 1911, shows a decrease in both frequency and severity. In 1912, however, there was a marked increase in frequency—from 111.8 to 153.5—but the severity rate dropped from 18.6 to 14.3. In other words accidents had very greatly increased in frequency, but they were less serious in their total results. In 1913 this experience was reversed. A marked reduction occurred in accident frequency—from 153.5 to 114.5—while the severity rate jumped from 14.3 to 21.3. In other words, the year 1913, instead of being a "good" year, as it might be assumed to be under the system of frequency rates was a very bad year, the worst of the four years covered by the table.

A further comparison of accident frequency rates with severity rates is made in the three following charts. The first chart represents graphically the data presented in the last table but extending back to 1905. No attempt should be made to compare the length of the lines in the two sections of the chart for the quantities represented are totally incommensurable.

The second chart gives the combined accident experience of a great steel plant for the years 1905 to 1913, by departments, showing night and day accidents separately. The value of severity rates is strikingly manifested in showing the greater severity of night accidents over day accidents and the greater severity rates for blast furnaces as compared with other departments and the greater severity rates for yards at nighttime. This chart deserves thorough study.

The third chart gives accident rates for 1912 in the machine-building industry by departments and should be compared with the two charts showing accident rates in the steel industry. The severity rates in different departments are most instructive and valuable.

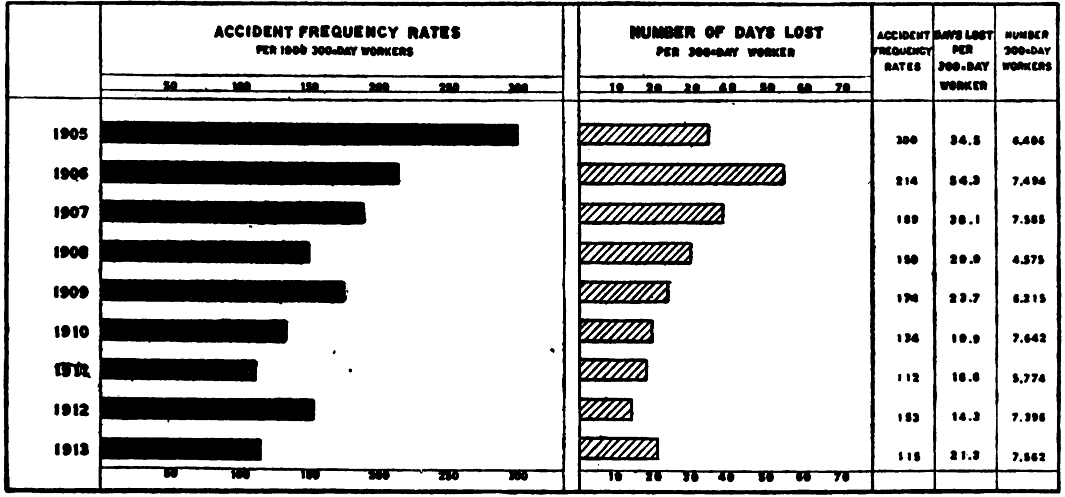
These illustrations bring up two points which it seems desirable to emphasize. The first concerns the use of terms. Severity rates derived in the manner explained are expressed for convenience in terms of workdays lost. For instance, the steel plant referred to

FREQUENCY AND SEVERITY OF ACCIDENTS

IN THE IRON AND STEEL INDUSTRY.

EXPERIENCE OF A LARGE PLANT 1905-1913.

SHOWING THE VARIATION IN ACCIDENT RATES OVER A PERIOD OF YEARS, AND CONTRASTING ACCIDENT FREQUENCY AND ACCIDENT SEVERITY (SEVERITY BEING MEASURED IN TERMS OF DAYS LOST. SEE TEXT.)



	ACCIDENT FREQUENCY RATES	DAYS LOST PER 300-DAY WORKER	NUMBER 300-DAY WORKERS
1905	300	34.5	6,406
1906	214	54.3	7,494
1907	189	38.1	7.385
1908	150	29.9	4.575
1909	176	23.7	6.215
1910	134	19.9	7.642
1911	112	18.6	5,774
1912	153	14.3	7.396
1913	115	21.3	7.562

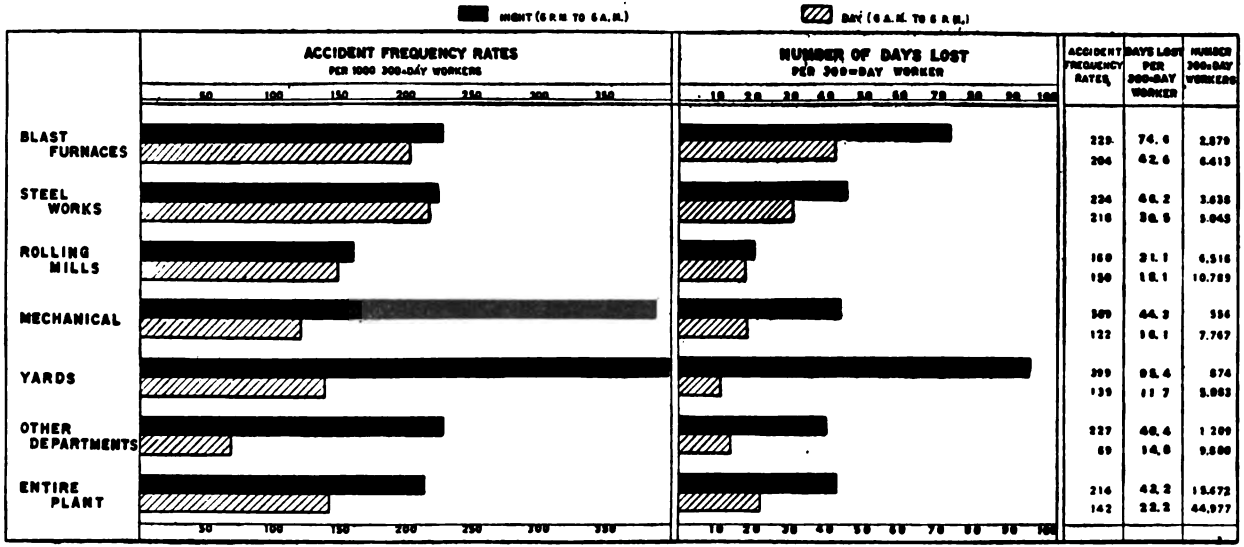
CHART I

NIGHT AND DAY ACCIDENT RATES

EXPERIENCE OF A LARGE STEEL PLANT.

PART 2 BY DEPARTMENTS. (COMBINED DATA FOR 1906 TO 1913)

SHOWING MARKED EXCESS OF NIGHT ACCIDENTS OVER DAY ACCIDENTS, AS REGARDS BOTH FREQUENCY AND SEVERITY



	ACCIDENT FREQUENCY RATES	DAYS LOST PER 300-DAY WORKER	NUMBER 300-DAY WORKERS
BLAST FURNACES	229 204	74.6 42.6	2,879 6,413
STEEL WORKS	224 216	46.2 30.5	3,638 5,045
ROLLING MILLS	160 150	21.1 18.1	6,516 10,789
MECHANICAL	389 122	44.3 18.1	556 7,767
YARDS	399 139	95.4 11.7	874 5,083
OTHER DEPARTMENTS	227 69	40.4 14.0	1,209 9,800
ENTIRE PLANT	214 142	42.2 22.2	15,672 44,977

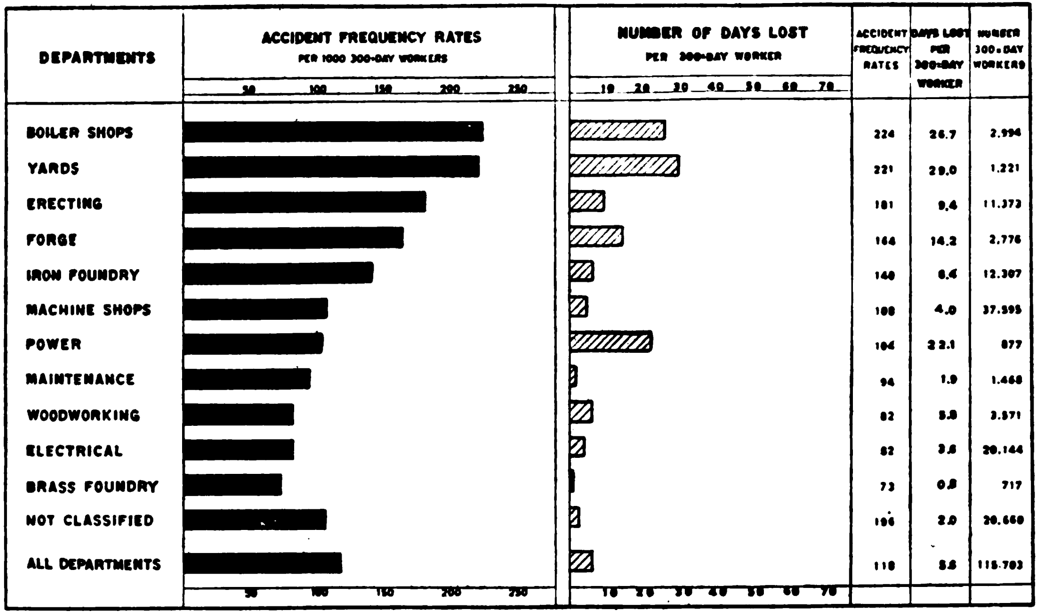
CHART 2

FREQUENCY AND SEVERITY OF ACCIDENTS

IN THE MACHINE BUILDING INDUSTRY. 1912.

COMBINED DATA FOR 194 PLANTS

SHOWING THE VARIATION IN ACCIDENT RATES IN THE IMPORTANT DEPARTMENTS, AND CONTRASTING ACCIDENT FREQUENCY AND ACCIDENT SEVERITY (SEVERITY BEING MEASURED IN TERMS OF DAYS LOST).



DEPARTMENTS	ACCIDENT FREQUENCY RATES	DAYS LOST PER 300-DAY WORKER	NUMBER 300-DAY WORKERS
BOILER SHOPS	224	26.7	2,994
YARDS	221	29.0	1,221
ERECTING	181	9.4	11,373
FORGE	164	14.2	2,776
IRON FOUNDRY	140	6.6	12,307
MACHINE SHOPS	108	4.0	37,395
POWER	104	22.1	877
MAINTENANCE	94	1.9	1,468
WOODWORKING	82	5.8	3,571
ELECTRICAL	82	3.6	20,144
BRASS FOUNDRY	73	0.8	717
NOT CLASSIFIED	106	2.0	20,660
ALL DEPARTMENTS	118	5.6	115,703

CHART 3

above is spoken of as having a severity rate, in 1913, of 21.3 days lost per 300-day worker. The term "days lost" as thus used is to some extent a statistical abstraction, but it is close enoughto concrete fact to permit of its use in its ordinary sense without any considerable degree of error, provided that the weighting scale employed is a reasonable one. In any case, however, the real significance of severity rates is in their use not as positive amounts but as relative amounts, as indicating the relation between groups. Thus, to recur to the example of the steel plant mentioned, the important fact is that the severity rate for 1913 shows an increase over that for 1911 in the relation of 21.3 to 14.3.

This leads to the second point which it is desired to emphasize. The fact that the real significance of severity rates is in the measurement of relative hazards renders comparatively unimportant the character of the weighting scale used. Thus by changing the weights in the scale offered above the resulting severity rates may be considerably altered in their positive amounts, but unless the changes are of a very radical character the relations between the rates for different groups will remain substantially the same. In other words, it is desirable to have the scale used as accurate as possible but the fact that a completely accurate scale can not be devised does not impair the value of accident severity rating.

In conclusion, it may be noted that severity rates have a very important advantage over frequency rates in that the errors in accident reporting are minimized. Accident reports are probably never absolutely complete, and, as a rule, the completeness of reporting is in direct proportion to the seriousness of injury. The more serious the injury the greater the likelihood of its being reported. Frequently the reporting of minor injuries is extremely incomplete. Note, for example, the experience of the Federal Government shops as described in the April number of the REVIEW, the estimate being there made that in such shops probably as many as three-fifths of the disabilities of less than two weeks are not reported. Inasmuch as the accuracy of frequency rates depends upon the completeness of accident reports, and as all accidents have the same weight, a failure to report any considerable number of minor accidents renders the rates obtained of very little value. Such is not the case with severity rates. Here the disabilities are weighted according to their importance and a large group of minor disabilities has comparatively little effect upon the derived severity rate. Thus, from the material available concerning the iron and steel industry, it is estimated that the total exclusion of all disabilities of less than two weeks will rarely diminish the total severity rate for that industry as much as 1 per cent, whereas such an exclusion would diminish frequency rates as much as 60 per cent. In the machine-building industry the corresponding percentages are 7 and 70, according to data collected by the Bureau of Labor Statistics.

A STUDY OF WELFARE WORK.

The Bureau of Labor Statistics has begun the collection of material for a bulletin to be called "A Handbook on Welfare Work"; a schedule has been outlined; a preliminary inquiry form prepared and sent to 1,250 establishments in the United States reported as engaged in some form of industrial betterment. These forms were mailed June 9 and 10, and, as indicative of the interest manifested in this work, by the 16th of the month over 300 replies had been received.

The bureau has done some work along this line in the past—notably the article by Victor H. Olmsted on "Industrial betterments," in Bulletin No. 31; then in Bulletin No. 54 considerable space was given to housing of employees by American employers. In Bulletin No. 123 was published a survey of welfare work in the United States by Elizabeth L. Otey. The bulletin was brief, and as the editions of this and all other bulletins dealing with the subject have long ago been exhausted the bureau has taken up the subject in a far more thorough and exhaustive manner than ever before. It is intended to make the handbook the authoritative reference work on this important subjeot.

The definition which the bureau puts upon the term "welfare work" bespeaks the broad scope proposed for the survey. It has defined welfare work as:

> Anything over and above wages which an employer does for the employee's comfort or improvement, whether social or intellectual, which is not required by law or by the necessity of the industry.

With this comprehensive definition of the term in view a list of the best known forms or types of welfare work was drawn up and sent to all firms known to be interested in welfare work, with the following letter:

> The Bureau of Labor Statistics of the United States Department of Labor is collecting material for a handbook on welfare work. The purpose is to show what is being done for the benefit of various classes of employees in the industrial and commercial establishments of the United States.
>
> The lines of welfare work that have proven most practical and generally satisfactory in the experience of a large number of employers will receive special attention in the report. Photographs, building plans, and a full statement of construction costs will be shown for the most typical club and bath houses, lunch or dining room accommodations, etc. In a brief preliminary investigation in New York City the bureau met with gratifying cooperation from employers, several of whom have already submitted comprehensive statements accompanied by photographs and blue prints.
>
> I inclose a list of the kinds of welfare work or industrial betterment most commonly met with and shall appreciate your courtesy if you will check off, according to directions, those which are being carried on by your establishment or any of its branches or departments. A franked envelope which requires no postage is inclosed for your reply. An early response is earnestly requested.
>
> I am, very truly, yours,
>
> ——— ———,
>
> *Commissioner of Labor Statistics.*

U. S. Department of Labor,
BUREAU OF LABOR STATISTICS,
Washington.

Name of firm.. Industry................
Address...

Place a cross (x) before each branch of welfare work conducted by you. Place a second cross before those already checked which are more important or more satisfactory than the others. Place a third cross before those considered of most importance or working most satisfactorily.

......Rest rooms.
......Recreation rooms.
......Emergency or first-aid rooms
......Shower or other baths.
......Wash rooms.
......Cloakrooms.
......Lockers.
......Lunch rooms or restaurants.
......Clubrooms.
......Clubhouses.
......Gymnasiums.
......Swimming pools.
......Libraries or reading rooms.
......Social gatherings.
......Entertainments.
......Motion pictures.
......Outings.
......Lectures.
......Music.
......Baseball or other recreation grounds.
......Roof gardens.
......Company hospitals.
......Beds in general hospitals.
......Houses rented to employees.
......Houses sold to employees.
......Lodging houses for employees.
......Work among employees' families.
......Benefit associations.
......Pension funds.
......Group insurance.
......Classes on employer's time (exclude apprentice work).
......Other classes at employer's expense.
......Saving system.
......Cooperative buying.
......Vacation with pay.
......Sick leave with pay.
......Physical examination on entrance.
......Periodic examination after employment.
......Other forms of welfare work (specify).

The plan of the study will be to get first as complete returns as possible from every establishment with activities coming within the definition of welfare work. From this list will be selected those having the most satisfactory form or type for each recognized branch of the work, and an intensive study made of these.

For instance, suppose of the twelve or fifteen hundred establishments doing some form of welfare work 300 have free bathing facilities. This fact will be stated, together with the total number of employees availing themselves of the use of such bathrooms, with the percentage these are of the whole number of employees; but in addition to such general and statistical information, a fair number of the better types and plans of bathrooms will be selected and described in detail, with photographs, plans, and cost of construction, so that any employer intending to construct a bathhouse can, from this handbook, select the most suitable plan and proceed to construct his bathhouse without further delay. This same course will be followed with regard to clubrooms, clubhouses, lunch rooms, roof gardens, hospitals, houses for rent or sale to employees, and all forms of welfare work where photographs, with costs accompanying each set of plans, are practicable.

In that class of work where descriptions of working methods must be given, such as benefit associations, pension funds, work among employees' families, cooperative buying, and the like, full details of plans, methods, and costs will be given for a few selected from the most successful and satisfactory, while not ignoring the statistical side of the entire class. A classification of welfare work by industries will be made in an effort to show what types and standards of work seem best adapted to certain industries, such as mining, textiles, etc. A complete list of firms doing any sort of welfare work will be given, together with the kinds of work each is doing.

It is significant that group insurance is being covered in this investigation as a branch of welfare work, and will, it is believed, be fully described for the first time in a Government report. While called a "handbook," the report will be in fact encyclopedic in the sense of a complete, ready reference book, or text book.

The field work will consist in making intensive studies of the establishments selected as presenting the more satisfactory examples of the various forms of activities covered by the investigation. Owing to the fact that large employers of female labor are among the prominent promoters of welfare work, the Bureau of Labor Statistics has put three agents from the Woman's Division of the bureau on the investigation, who are now working in New England. Two male agents of the bureau will follow in the field soon. The schedule now in tentative use in the field, and which has proven so satisfactory that it is likely to become the permanent form, will serve to complete the reader's view of the bureau's method, and is therefore here reproduced.

U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
Washington

INDUSTRIAL BETTERMENT AND SOCIAL IMPROVEMENT, 1916

1. Industry.................................. 2. City and State..................
3. Name of establishment..
4. Address..
5. Number of employees: *a* Male.................. *b* Female..................
6. Date of establishment..

NOTE.—If space allowed for answers is insufficient use separate sheets, numbering your answers to correspond with the questions.

7. Rest and recreation rooms. (Describe, and give number of employees using. Photographs and blue prints are desired where practicable. State whether rest periods are allowed.)

....

....

8. Emergency or first-aid rooms. (Describe, and give number of employees, male and female, treated in a typical month. Photographs and blue prints are desired where practicable.)

....

....

9. Bath and wash rooms. (Describe, and give number of employees using. Photographs and blue prints are desired where practicable. State soap and towel service used. Is bathing allowed on employer's time?)

....

....

10. Cloak and locker rooms. (Describe, and give number of employees using. State type of locker used.)

....

....

11. Lunch rooms or restaurants. (Describe, and give number of employees using. Photographs and blue prints are desired where practicable. Submit sample bills of fare.)

....

....

12. Club rooms or houses. (Describe, and give number of employees using, hours open, and dues or fees. Photographs and blue prints are desired where practicable.)

....

....

13. Libraries or reading rooms. (Describe, and give number of employees using, hours open, and dues or fees.)

....

....

14. Social gatherings, outings, music, and lectures. (Describe entertaining or instructive gatherings, in doors or out, and give number of employees participating, and dues or fees. If own auditorium, describe and supply photographs and blue prints if practicable.)

....

....

15. Gymnasium or recreation grounds. (Include here bowling alleys, swimming pools, etc., unless reported under club house or elsewhere. Describe, and give number of employees using, and dues or fees. Photographs and blue prints are desired where practicable.)

....

....

16. Hospital arrangements. (State whether employer has own hospital or beds in general hospital. If former, describe, and give number of employees treated and dues or fees. Photographs and blue prints are desired where practicable.)

....

....

17. Housing of employees. (Describe company houses, whether rented or sold, and give construction costs and rentals. Also describe lodging houses, if any. Photographs and blue prints are desired where practicable.)

....

....

18. Work among families of employees. (Describe classes, kindergartens, playgrounds, work of doctor, clinic, or visiting nurse, amusements, insurance, or anything else done for families, and give number of families reached. Photographs and blue prints of playground, amusement hall, etc., are desired where practicable.)

....

....

19. Trade or other education. (Describe all except apprentice classes and such continuation work as is required by law. Include English for foreigners. Give number of employees participating.)

....

....

20. Benefit associations. (Submit copy of constitution and by-laws. State what part of fund is contributed by employer, and give number of employees included and number receiving benefits last year.)

....

....

21. Pension fund. (Submit copy of plan and give number of employees included and number receiving pensions last year, and amount.)

....

....

22. Group insurance:

(*a*) Sickness. (Give number included and number receiving benefits last year, and amount.)

....

....

(*b*) Accident. (Give number included and number receiving benefits last year, and amount.)

....

....

(*c*) Death. (Give number included and number of benefits paid last year, and amount.)

....

....

23. Encouragement of thrift. (Describe savings and loan funds, building funds, cooperative buying, legal aid, and advice as to expenditures, and give number of employees taking advantage of.)[1]

....

....

24. What vacation is allowed—

(*a*) With pay?..

(*b*) Without pay?...

25. What sick leave is allowed—

(*a*) With pay?..

(*b*) Without pay?...

---

[1] General subject of profit sharing and stock ownership has been covered by a recent investigation and need not be entered here.

26. Periodic physical examination of employees. (Submit blank form used.)
  (*a*) How often, and in what departments?

....

....

  (*b*) Describe what is done to restore employees to health, and any other results of periodical physical examinations.

....

....

27. Describe methods of relief in monotonous and fatiguing occupations. (Name occupations, and give number of employees in each, by sex.)

....

....

28. Describe system of drinking-water supply. (Give type of cup used, if any.)

....

....

29. Date of organization of welfare work at this plant?..........................

30. How do present conditions compare with those before welfare work started as regards—
  (*a*) Time lost, by sickness or other cause?..........................
  (*b*) Stability of labor force?..........................
  (*c*) Output per employee?..........................

31. Is the welfare work administered by—
  (*a*) Employer alone?..........................
  (*b*) Employer and employees jointly?..........................
  (*c*) Outside agencies cooperating (such as Y. M. or Y. W. C. A., social settlements, board of education, etc.)..........................

32. Is welfare secretary employed?..........................

33. What per cent is cost of welfare work of total pay roll?..........................
  (*a*) Amount of pay roll last year?..........................
  (*b*) Cost of welfare work last year?..........................
      or
  (*c*) Per cent welfare work forms of total pay roll?..........................

34. Please describe any activities not specified in the foregoing and make any comments or suggestions which may be of value in the study. Copies of all literature bearing on the schedule, including publications got out by employer or employees, are requested.

....

....

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MAY 16 TO JUNE 15, 1916.

The organic act of the Department gives the Secretary of Labor authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation. During the month, May 16 to June 15, 1916, the Secretary exercised his good offices in 21 labor disputes, the companies involved, the number of employees affected, and the results secured, so far as information is available, being as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, MAY 16 TO JUNE 15, 1916.

Name.	Workmen affected—		Result.
	Directly.	Indirectly.	
Brewery workmen, Wilmington, Del.—strike			Pending.
Western Union Telegraph Co., Boston, Mass.—controversy between company and clerks.			Do.
Railway express drivers, Chicago, Ill.—lockout	2,000	(1)	Do.
Cigar makers, B. Plotkin, New Haven, Conn.—strike			Adjusted.
Farrell Foundry & Machine Plant, Ansonia, Conn.—strike	75		Pending.
Davison Chemical Co., Curtis Bay, Md.—strike	700		Do.
Maine Central R. R. Co., Portland, Me.—controversy between company and clerks.	362		Adjusted.
Mechanics engaged in construction of county courthouse, El Paso, Tex.—strike.	25	150	Pending.
Mechanical department of the Norfolk Navy Yard, Norfolk, Va.—controversy.			Do.
New York Shipbuilding Plant, Camden, N. J.—strike	1,000		Do.
Boston & Maine R. R. Co., Boston, Mass.—controversy between company and shopmen.	3,941		Adjusted.
Vanberg Silver Co., Rochester, N. Y.—strike	60		Pending.
Wm. R. Thropp & Sons Co., Trenton, N. J.—strike			Do.
Leolastic Co., Bayonne, N. J.—strike	300		Do.
Maybrook Central New England Ry., Walden, N. Y.—strike	60		Do.
American Refractories Co., Rockdale, Ill.—strike			Unable to adjust.
Washington Terminal Co., Washington, D. C.—strike			Adjusted.
Apperson Automobile Works, Kokomo, Ind.—controversy			Unable to adjust.
California Shipbuilding Co., Long Beach, Cal.—controversy			Do.
Western Maryland R. R. Co., Baltimore, Md.—controversy			Adjusted.
New York, New Haven & Hartford R. R. Co.—controversy between company and clerks.			Do.

[1] Practically all the business in Chicago.

The following cases, noted as pending in the statement of May 15, published in the June issue of the REVIEW, have since been adjusted:

J. B. Stetson Co., Philadelphia—strike.
Building Material Teamsters, Cleveland—controversy.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MARCH 4, 1913, TO JUNE 6, 1916.

The conciliation work of the Department from its organization to June 6, 1916, is briefly summarized in the following pages. The data in regard to number of employees involved in the disputes handled are incomplete, but they show a total of 234 controversies handled in which nearly 250,000 employees were directly involved and in addition more than 300,000 employees indirectly affected. These figures do not include 15 cases in which the numbers of employees affected were not reported and a very large number of cases in which the numbers indirectly affected were unknown.

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 4, 1913, TO JUNE 6, 1916.

Period.	Workmen affected.		Amicable adjustments.	Unable to adjust.	Pending.	Total.
	Directly.	Indirectly.				
Mar. 4, 1913, to June 30, 1914	67,912	57,751	28	5	....	33
July 1, 1914, to June 30, 1915	46,153	92,082	26	10	[1] 4	[2] 36
July 1, 1915, to June 6, 1916	129,372	151,319	95	18	52	165
Total	243,437	301,152	149	33	[2] 52	234

[1] These 4 cases were adjusted during the fiscal year 1915–16 and are included in the 95 amicable adjustments of that year.

[2] Not including 4 cases adjusted during the fiscal year 1915–16.

MEDIATION AND CONCILIATION WORK.

Mar. 4, 1913, to June 30, 1914, close of second fiscal year.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
New York, New Haven & Hartford R. R. clerks	....	....	Adjusted.
New York, New Haven & Hartford R. R. (reopened)	1,800	15,000	Do.
Erie Forge Co	....	....	Do.
Reading R. R. workers	900	1,200	Do.
Reading Hardware Co	180	580	Unable to adjust.
Baltimore & Ohio R. R. machinists	2,000	16,000	Adjusted.
Western Maryland R. R. shopmen	250	....	Do.
Chicago & Alton R. R. shopmen	485	....	Do.
Indianapolis car workers	900	....	Do.
Indianapolis teamsters	3,200	....	Do.
Pere Marquette R. R. shopmen	1,500	....	Unable to adjust.
Colorado coal strike	10,000	....	Strike declared off.
Calumet copper strike	....	....	Unable to adjust.
Louisville & Nashville R. R. shopmen	180	....	Adjusted.
Sawmill workers, Raymond, Wash	150	1,500	Do.
Garment workers, Philadelphia	3,400	....	Do.
Longshoremen, Port Arthur, Tex	290	....	Do.
Big Four R. R. shopmen	700	2,000	Strike averted.
Lake Erie & Western R. R. shopmen	400	1,500	Do.
Michigan Central R. R. shopmen	550	2,000	Adjusted.
Universal Bottle-Washing Machine Co., Detroit	189	....	Do.
Coal miners' strike, West Virginia	15,000	....	Do.
Coal & Coke Ry. shopmen	181	....	Do.
Licensed tug men on Great Lakes	38	8,608	Do.
Westinghouse Electric Co	13,000	....	Do.
Fulton Bag & Cotton Co	450	1,650	Unable to adjust.
Machinists of Trenton, N. J	435	6,813	Adjusted.
Cement workers, Mitchell, Ind	676	....	Do.
Tidewater boatmen, New York	3,000	....	Strike averted.
Keystone Steel & Wire Co	50	100	Adjusted.
Postal telegraphers	8	300	Strike averted.
Pere Marquette R. R. clerks	....	....	Unable to adjust.
Illinois Central R. R. shopmen	8,000	500	Adjusted.
Pennsylvania R. R. shopmen	....	....	Do.
Total	67,912	57,751	

July 1, 1914, to June 30, 1915, close of third fiscal year.

Coppersmiths, Fore River Shipbuilding Yards—strike	50	....	Unable to adjust.
Fulton Bag & Cotton Co (reopened)	450	1,650	Do.
Reading Hardware Co. (reopened)	180	580	Do.
Cement workers, Mitchell, Ind. (reopened)	676	....	Adjusted.
Southern Ry. clerks	675	12,000	Do.
Eastern Ohio coal strike	18,000	....	Do.
Machinists, Lansford, Pa	51	10,000	Do.
Car builders, Pennsylvania Lines west of Pittsburgh, Richmond, Ind.—controversy.	40	....	Unable to adjust.

MEDIATION AND CONCILIATION WORK—Continued.

July 1, 1914, to June 30, 1915, close of third fiscal year—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Machinists, Hartford, Conn.—controversy	50	323	Adjusted.
Building trades men, Buffalo, N. Y	4,000		Do.
Central locomotive Co.—lockout	60	250	Do.
Boiler makers, Oklahoma and Texas—strike	1,000		Do.
Iron, steel, and tin workers, Canton and Massillon, Ohio—strike	475	310	Do.
Seaboard Air Line Ry. Co.—controversy, interpretation of contract.			Settled by solicitor.
Full-fashioned knitters, Reading, Pa.—strike	65		Unable to adjust.
Typographical dispute, New Orleans, La	186	114	Do.
Derby Silver Co., Derby, Conn.—lockout	250	5,000	Adjusted.
Longshoremen, Pacific coast—strike	7,794	20,000	Strike averted.
Coal miners, Hazelton, Pa.—strike	200		Adjusted.
Western Union controversy, St. Louis, Mo	40		Do.
Coopers, Paragould, Ark.—strike	138		Do.
Lenoir City, Tenn., and other points in South—textile strike	300	350	Unable to adjust.
Wilkes-Barre Street Ry. Co	345	255	Adjusted.
Indianapolis Terminal Co.—controversy	1,000		Do.
Paper mills, Hamilton, Ohio, and other points—strike			Strike averted.
International Paper Co., New York and New England points—threatened strike.	5,023		Pending.
De Grasse Paper Co., Pyrites, N. Y			Strike averted.
Remington-Martin Paper & Power Co., Watertown, N. Y	500		Unable to adjust.
St. Regis Paper Co., Deferiet, N. Y	430		Do.
Taggart Paper Co., Felts Mills, N. Y			Adjusted.
Clerks, New York, New Haven & Hartford R. R. Co.—threatened strike.	1,800		Do.
Textile workers and Dobson's Mills, Germantown, Pa.—controversy.	150	500	Do.
Bessemer Iron Works, Grove City, Pa.—strike			Unable to adjust.
Necktie cutters, New York City—strike	300		Adjusted.
Overbrook Carpet Mills, Philadelphia	200		Do.
C. H. Masland & Sons, Philadelphia—strike	300	750	Do.
Machinists and boiler makers, La France Fire Engine Co., Elmira, N. Y.	300		Pending.
Clerks and Chicago & Eastern Illinois R. R.—controversy	400		Adjusted.
Shopmen, Kansas City Terminal Ry. Co.—strike	225	38,000-40,000	Pending.
"Boarders," John Blood Textile Mills, Philadelphia—strike	500		Do.
	46,153	92,062	
June 30, 1915, to June 1, 1916, first 11 months of fourth fiscal year.			
International Paper Co., New York and New England—strike	(1)	(1)	Adjusted.
Machinists and boiler makers, American La France Fire Engine Co.—strike.	(1)	(1)	Do.
Shopmen, Kansas City Terminal Ry. Co.—strike	(1)	(1)	Do.
"Boarders," John Blood Textile Mills—strike	(1)	(1)	Do.
Plumbers, Salem, Mass.—strike	147	2,000	Do.
Metal polishers, Colts Fire Arms Co., Hartford, Conn.—strike	40	1,200	Unable to adjust.
Capewell Horse Nail Co., Hartford, Conn.—strike	54	319	Do.
Street railway employees, Providence, R. I.—strike	5,000		(2)
Hardwick & Magee and dyers and mercerizers, Philadelphia—controversy.	78	1,100	Adjusted.
Pattern makers, Lake Torpedo Boat Co., Bridgeport, Conn.—strike.	11	180	Do.
Machinists, Becker Milling Machine Co., Boston, Mass.—strike	300	200	Unable to adjust.
Standard Oil Co., Tide Water Oil Co., Bergen Point Chemical Co., Bayonne, N. J.—strike.	8,500	1,500	Adjusted.
Pattern makers and Fore River Ship & Engine Co., Quincy, Mass.—controversy.			Pending.
Keystone Spinning Mills, Philadelphia—strike	200		Adjusted.
Spinks Textile Mills, Philadelphia—strike	90	100	Do.
John Bromley & Son Dye Works, Philadelphia—strike	79	1,375	Do.
O'Keefe Bros. Dye Works, Philadelphia—controversy	20	20,000	Strike averted.
General Process Dye Works, Philadelphia—strike	250		Adjusted.
Buffalo Dye Works, Philadelphia—strike	37	63	Do.
International Silver Plate Co., Meriden, Conn.—controversy	2,600	3,500	Unable to adjust.
Boiler makers, Baltimore & Ohio R. R., Newark, Ohio—strike	50		Adjusted.
Iron molders, Rice, Barton, Fales Foundry Co., Worcester, Mass.—strike.	60		(3)

[1] Included in previous fiscal year.

[2] Strike declared off before arrival of commissioners.

[3] 60 molders went on strike; places filled; plant running full time and orders being filled promptly.

MEDIATION AND CONCILIATION WORK—Continued.

June 30, 1915, to June 1, 1916, first 11 months of fourth fiscal year—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Columbia Railway, Gas & Electric Co., Columbia, S. C.—controversy.	89		Adjusted.
American Graphophone Co., Bridgeport, Conn.—strike	2,130		Do.
Brown & Sharpe Co., Providence, R. I.—strike	5,000	800	Unable to adjust.
Wireless operators, San Francisco—strike	20	107	Pending.
Coal & Coke Ry. Co. and shopmen—reopened controversy	181		Adjusted.
Textile workers, Penn Mills, Norristown, Pa.—controversy	1,000	7,000	Do.
Machinists and boiler makers, Lehigh & New England R. R., Pen Argyl, Pa.—strike.	71	100	Do.
Pattern makers, job shops, Pittsburgh—strike	40		Unable to adjust.
Machinists, Cincinnati, Ohio—strike	3,050	5,000	Pending.
Arizona Copper Mines—controversy and strike	4,500	300	Adjusted.
Machinists, Hendy Machine Co., Torrington, Conn.—strike	934		Do.
Machinists, Hendy Machine Co., Torrington, Conn. (reopened)			Pending.
Washington Steel & Ordnance Co., Geisboro Point, D. C.—strike.	200	1,400	Adjusted.
Pattern makers, Builders Iron Co., Providence, R. I.—strike	161	630	Unable to adjust.
Pattern makers, Potter & Johnston, Pawtucket, R. I.—strike	800	925	Do.
Michigan Central R. R. and clerks, Detroit, Mich.—controversy.	800	5,500	Adjusted.
Pennsylvania R. R. freight handlers, Jersey City, N. J.—strike	1,000	700	Do.
Eagle Lock Co., Terryville, Conn.—strike	1,200		Do.
Lace makers, Zion City, Ill.—strike	78		Unable to adjust.
Freight handlers, Boston & Albany, Boston & Maine, and New Haven R. R., Boston—strike.	1,500		Adjusted.
Essex Rubber Co., Trenton, N. J.—strike	112	350	Do.
Nashua Manufacturing Co., Nashua, N. H.—strike	3,500		Pending.
Jackson Mills, Nashua, N. H.—strike			Do.
Judson Cotton Mills, Greenville, S. C.—strike	654		Do.
Brogon Mills, Anderson, S. C.—strike	575	1,500	Adjusted.
Modern Tool, Die & Machine Co., Columbus, Ohio—strike	42		Do.
Dunlap Manufacturing Co., Columbus, Ohio—strike	94		Unable to adjust.
Machinists, The Recording & Computing Co., Dayton, Ohio—strike.	300	2,000	Do.
Joseph R. Foster Mill, Philadelphia—controversy	175	225	Pending.
Saxonia Mills, Philadelphia—strike	260	225	Adjusted.
Cleveland-Canton Spring Co., Canton, Ohio—strike	63	200	Do.
Cooper Spring Co., Cleveland, Ohio—strike	32	80	Do.
Perfection Spring Co., Cleveland, Ohio—strike	90	1,750	Do.
Studebaker Co., South Bend, Ind.—strike	100	4,500	Do.
Herman Gross Co., Hartford, Conn.—strike	15		Do.
New Haven Clock Co., New Haven, Conn.—strike	40		Do.
Ladies' Garment Workers and shirtwaist manufacturers, Philadelphia—controversy and strike.	5,000		Do.
Metal polishers, Meriden, Conn.—strike	3,000		Pending.
Bradford Mills, Philadelphia—strike	175	900	Adjusted.
Brewery workers, Washington, D. C.—strike	240		Do.
Clerks, The Big Four R. R. Co., Cincinnati, Ohio—strike	58	680	Unable to adjust.
Allied shopmen and Cincinnati, Hamilton & Dayton R. R.—controversy.	1,200		Pending.
Musical instrument manufacturers and metal polishers, Elkhart, Ind.—controversy.	456	751	Unable to adjust.
Baltimore & Ohio R. R. and machinists, Baltimore, Md.—controversy.	1,514		Adjusted.
New York, New Haven & Hartford R. R. Co. and mechanical force, New Haven, Conn.—controversy.	4,000		Do.
Machinists, Edwards Valve Co., East Chicago, Ind.—strike	600		Do.
Germantown Dye Works, Philadelphia—strike	100		Pending.
Allegheny Dye Works, Philadelphia—strike			Do.
Continental Dye Works, Philadelphia—strike	50		Do.
Wm. Kedward Dyeing Co., Philadelphia—strike	16		Do.
Nicetown Dye Works, Philadelphia—strike	12		Do.
Globe Dye Works, Philadelphia—strike	100		Do.
Philadelphia Dye Works, Philadelphia—strike	60		Do.
Karl Schlatter Dye Works, Philadelphia—strike	150		Do.
Frankford Dyeing & Bleaching Works, Philadelphia—strike	22		Do.
Firth & Foster Co., Philadelphia—strike			Do.
Machinists, Stewart Hartshorn Co., Harrison, N. J.—strike	30	1,200	(1)
Machinists and the contract shops, Norfolk, Va.—controversy	65	300	Adjusted.
Alaskan R. R.—controversy			Do.
Motormen and conductors, Capital Traction Co. and Washington Ry. & Electric Co., Washington, D. C.—strike.	1,500		Do.
New York, Ontario & Western R. R., Middletown, N. Y.—strike	550	1,800	Do.
General Processing Co., Philadelphia—strike	250		Do.

[1] Shop closed and company insists strike is closed incident.

MEDIATION AND CONCILIATION WORK—Continued.

June 30, 1915, to June 1, 1916, first 11 months of fourth fiscal year—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Jacob Berges & Co., Philadelphia—strike	25		Adjusted.
Orinoco Dye Works, Philadelphia—strike	45	600	Do.
Ford Silk Hosiery, Philadelphia—strike	6		Do.
Greer's Dye Works, Philadelphia—strike	260		Do.
Philadelphia Tapestry Works, Philadelphia—strike	34	450	Do.
Quaker Dye & Bleach Works, Philadelphia—strike	100		Do.
Stead & Miller's Dye Works, Philadelphia—strike	528		Do.
Wallace Wilson's Dye Works, Philadelphia—strike	16	450	Do.
Chrsto's Silk Hosiery, Philadelphia—strike	16		Do.
George Liffart, spinner and dyer, Philadelphia—strike	10		Do.
Berkshire Mills, Frankford, Philadelphia—strike	9	300	Do.
States (typographical), New Orleans, La.—controversy			Pending.
Times-Union (typographical), Jacksonville, Fla.—controversy			Do.
The Doubleday, Page Printing Co., New York City—controversy	150-200	21,135	Do.
New York Post, New York City—controversy			
Haynes Automobile Co., Kokomo, Ind.—lockout	25	1,075	Adjusted.
Grand Central Terminal Co., New York—controversy			Unable to adjust.
Texas & Pacific Ry. Co.—controversy	700	8,000	Pending.
Pullman car cleaners, Chicago—strike	600		Adjusted.
Blacksmiths, Anderson Drop Forge Co., Detroit, Mich.—strike	12	250	Unable to adjust.
Hancock Knitting Mills, Philadelphia—strike	1	1,000	Adjusted.
Boiler makers, Cramp Shipbuilding Co., Philadelphia—strike	1,100		Do.
Chicago & Alton R. R. Co. and maintenance of way employees, Chicago—controversy.	1,085	315	Do.
J. B. Stetson Co., Philadelphia—strike			Do.
Building material teamsters, Cleveland, Ohio—controversy	742	30,000	Do.
American Refractories Co., Rockdale, Ill.—controversy	300		Unable to adjust.
Machinists, Syracuse, N. Y.—strike	2,500	700	Pending.
Machinists, Millers Falls Tool Co., Millers Falls, Mass.—strike	200	50	Adjusted.
Washington Terminal Co., Washington, D. C.—controversy	425		Do.
Apperson Automobile Works, Kokomo, Ind.—lockout	83	417	Unable to adjust.
Building trades, Joliet, Ill.—strike	820	2,000	Pending.
Westinghouse employees, East Pittsburgh—strike	36,000		Adjusted.
New York Boat Owners' Association and marine engineers, New York—controversy.	1,000	7,000	Do.
California Shipbuilding Co., Long Beach, Cal.—controversy and strike.	332	367	Unable to adjust.
Western Maryland R. R. Co., Baltimore, Md.—controversy	451	600	Adjusted.
Pittsburgh street railway employees, Pittsburgh, Pa.—strike	3,000		Do.
Railway workers, Pittsburgh & Lake Erie R. R., Pittsburgh, Pa.—strike.	4,000	6,000	Do.
Allen Dyeing Co., Philadelphia—strike	30		Pending.
W. H. Burns Co., Philadelphia—strike	20		Do.
Electric Dye Works, Philadelphia—strike	12		Do.
Fairhill Bleachery, Philadelphia—strike	12		Adjusted.
Victor Dye Works, Philadelphia—strike	18		Pending.
Ontario Dyeing Co., Philadelphia—strike	75		Do.
Charlotte Dye Works, Philadelphia—strike	12		Do.
Brehm & Stehle, Philadelphia—strike	100		Do.
Rainbow Dye Works, Philadelphia—strike	24		Do.
Red Star Dye Works, Philadelphia—strike	18		Do.
Fairhill Dye Works, Philadelphia—strike	14		Do.
Hulton Dyeing & Finishing Co., Philadelphia—strike	150		Do.
Oxford Dye Works, Philadelphia—strike	8		Do.
Kensington Dye Works, Philadelphia—strike	60		Do.
Angola Dyeing Co., Philadelphia—strike	20		Adjusted.
Thos. Weinmann & Sons, Philadelphia—strike	12		Pending.
American Dye Works, Philadelphia—strike	8		Do.
Vienna Dye Works, Philadelphia—strike	45		Do.
L. B. Luithlen Co., Philadelphia—strike	30		Do.
Thomas Dawson & Co., Philadelphia—strike	12		Adjusted.
Park Carpet Mills, Philadelphia—strike	608		Do.
Robert Meyer, Philadelphia—strike	59		Do.
Federal Dyeing Co., Philadelphia—strike	260		Do.
Caledonia Dye Works, Philadelphia—strike	15		Do.
John A. Roebling, Trenton, N. J.—strike	90		Do.
Mercer Auto Co., Trenton, N. J.—strike	80		Do.
J. R. Thorp, Trenton, N. J.—strike	100		Do.
W. R. Thorp, Trenton, N. J.—strike	40		Do.
J. L. Mott & Co., Trenton, N. J.—strike	12		Do.
H. Shal, Trenton, N. J.—strike	5		Do.
De Laval Co., Trenton, N. J.—strike	108		Pending.
Niles Tool Co., Hamilton, Ohio—strike	620		Adjusted.
Houver-Owen-Reutschler, Hamilton, Ohio—strike	200		Do.
Black & Clausen, Hamilton, Ohio—strike	100		Do.
Hamilton Machine Tool Co., Hamilton, Ohio—strike	200		Do.

MEDIATION AND CONCILIATION WORK—Concluded.

June 30, 1915, to June 1, 1916, first 11 months of fourth fiscal year—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Kissis Machine Co., Hamilton, Ohio—strike	55		Adjusted.
New York, New Haven & Hartford R. R. Co., New Haven, Conn.—controversy.	2,250		Do.
Brewery workmen, Wilmington, Del.—strike			Pending.
Western Union Telegraph Co., Boston, Mass.—controversy			Do.
Railway express drivers, Chicago—lockout	2,000	(1)	Do.
Cigar makers, B. Plotkin—strike			Adjusted.
Farrell Foundry & Machine Plant, Ansonia, Conn.—strike	75		Pending.
Davison Chemical Co., Curtis Bay, Baltimore, Md.—strike	700		Do.
Maine Central R. R. Co., Portland, Me.—controversy			Adjusted.
Mechanics engaged in the construction of the county courthouse, El Paso, Tex.—strike.	25	150	Pending.
Mechanical department of the Norfolk Navy Yard, Norfolk, Va.—controversy.			Do.
New York Shipbuilding Plant, Camden, N. J.—strike	1,000		Do.
Boston & Maine R. R., Boston—controversy			Adjusted.
	129,372	151,319	

(1) Practically all business in Chicago.

Below are given brief statements concerning a few of the more important labor disputes handled by the commissioners of conciliation of the Department of Labor since July 1, 1915:

In re Strike of 10,000 employees at the plants of the Standard Oil Co., the Tide Water Oil Co., and the Bergen Point Chemical Co., all located at Bayonne, N. J. Mr. John A. Moffitt and Mr. James A. Smyth, commissioners of conciliation.

On July 21, 1915, Sheriff Eugene Kinkead, of Hudson County, N. J., telephoned the Secretary, and requested that the Department exercise its good offices in an effort to effect a settlement of a strike of 10,000 employees at the plants of the oil companies at Bayonne, N. J. Mr. John A. Moffitt, of Orange, N. J., and Mr. James A. Smyth, of Renovo, Pa., were detailed to proceed to Bayonne for the purpose of acting as commissioners of conciliation, and were instructed to endeavor to effect an adjustment of the differences existing between the oil companies and their employees.

The commissioners arrived at Bayonne on the morning of July 23, and immediately held conferences with the company officials and the striking employees.

The superintendents of the oil plants stated to the commissioners that order and peace in the community should first be restored, and when this was accomplished, the companies were willing to take back all of their former employees excepting those who had been guilty of actual violence, and to consider any demands made by them that would permit of consideration. This statement of the superintendents was submitted to the men, who finally agreed to accept it, and by unanimous vote decided to return to work on July 28, thereby bringing to a close what threatened to be one of the greatest industrial conflicts of modern times. Immediately upon returning to work a notice was posted in the office of the Tide Water Oil Co., as follows:

> Fifteen per cent increase in wages for all those receiving less than $2 per day; 10 per cent to those receiving between $2 and $3 per day; 5 per cent for all those receiving over $3 per day.

The Standard Oil Co. posted the following notice:

> Ten per cent increase in wages to all those receiving less than $2.50 per day; 25 cents per day for those receiving higher wages. These increases to include employees of the Bergen Point Chemical Co.

The commissioners subsequently reported to the Department that the Standard Oil Co., the Tide Water Oil Co., and the Bergen Point Chemical Co. had granted the eight-hour day to their employees, the same having become effective on September 15, 1915, with no reduction in wages, and that 25,000 men profited by this grant. They also reported that by this order the above-mentioned companies conceded to their employees all the demands contained in the modified propositions presented to them on July 24, 1915.

In re Strike of copper miners in the Clifton-Morenci-Metcalf district of Arizona. Approximately 5,000 men involved. Mr. Jos. S. Myers and Mr. Hywel Davies, commissioners of conciliation.

On October 2, 1915, at the request of Gov. George W. P. Hunt, of Arizona, and other interested parties, the Secretary detailed Mr. Joseph S. Myers, of El Paso, Tex., to act as a commissioner of conciliation, and subsequently assigned Mr. Hywel Davies, of Lexington, Ky., to assist Mr. Myers in effecting a settlement of this important labor dispute.

After numerous conferences between the employers and employees a final settlement was reached on March 16, 1916. The terms upon which the settlement was effected are as follows:

> A minimum wage will be fixed on the highest basis of any mining camp in the State, regardless of race.
>
> A general advance of not less than 20 per cent to Mexicans and Spaniards.
>
> The wages of skilled workmen will compare more favorably with the best in the State than ever before.
>
> Reemployment of old employees without discrimination, excepting 10 men, guilty of criminal acts, and even this number may be reduced.
>
> Duncan camp refugees returned without friction, and to receive no favors more than those rendered to resident strikers.
>
> Guaranties that foremen guilty of exploitation of their working forces to their individual profit, or permitting it to be done for the benefit of anyone, will be promptly discharged.
>
> The job to fix the wage, regardless of race.
>
> Committees representing employees recognized. The managers will hold monthly conferences with their respective committees to insure that personal touch which will enable them to know the nature and cause of every complaint.
>
> In other words, the latchstring is now on the outside of the manager's office door instead of the inside, as claimed was the case in the past.

While the Western Federation of Miners has been eliminated, no objection is made to a local organization among the men.

The results indicate that about 90 per cent of the employees are members of this local organization, which is represented by a committee of five from each of the three companies. This committee acts individually on home affairs amd collectively on matters affecting the whole Clifton-Morenci-Metcalf district.

The psychological effects of the strike are shown in the elimination of race prejudices and the development of the solidarity of brotherhood among the workmen, which bears fruit in unity of purpose and willingness to suffer and sacrifice for their common good.

In re Controversy and strike between the Kansas City Terminal Co. and its shopmen. Mr. William Blackman, commissioner of conciliation.

Under date of June 1, 1915, Mr. A. O. Wharton, president of the railway employees department, telegraphed the Secretary from Kansas City, Mo., requesting that the Department send a representative to Kansas City for the purpose of effecting a settlement between the Kansas City Terminal Ry. and its shopmen located at that place.

On June 4 the Secretary detailed Mr. William Blackman, of Seattle, Wash., to proceed to Kansas City for the purpose of acting as a commissioner of conciliation and bringing about. if possible, an amicable adjustment of the controversy.

The Kansas City Terminal Ry., of Kansas City, Mo., takes care of 12 railroads running into the city. Nine of the 12 roads have agreements as to hours of labor and working conditions with their shop employees. Prior to June 8 the shopmen employed by the Kansas City Terminal Ry., through a committee, presented a set of rules which would govern the Terminal along the same lines as the nine roads above referred to. This agreement was rejected by the president of the Terminal Ry., and the result was that 34 shopmen, including the committee, were discharged.

On June 8 Mr. Blackman began negotiations with the president of the Terminal Railway in an endeavor to bring about an adjustment of the trouble. Failing in such adjustment, the discharged men, through their organizations, called a strike on July 29. On July 30 the commissioner appeared before the board of directors, who are the general managers of the roads involved, and laid the case before them in detail, with the result that negotiations were again taken up with Mr. H. H. Adams, president of the Terminal Railway. On August 7 an agreement was reached whereby all of the discharged men and the strikers returned to work August 10, and within 60 days negotiations between the company and representatives of the employees were completed, and a set of shop rules, conditions of employment, hours of service, wages, rates, etc., were mutually agreed upon.

If this strike had spread from the Terminal Ry., it would have affected between 38,000 and 40,000 men, and in the event of a general strike there is no doubt that the business public would have suffered on account of not being able to receive their freight shipments promptly.

This is one of the most important cases handled by the Department of Labor, on account of its far-reaching effect upon the railroads involved and the general public.

In re Controversy between the New York, New Haven & Hartford Railroad Co. and its clerks, New Haven, Conn. Mr. Rowland B. Mahany, commissioner of conciliation.

On May 12, 1916, Mr. C. L. Bardo, general manager of the New York, New Haven & Hartford Railroad, requested the Department to use its good offices in an endeavor to bring about an amicable settlement. Mr. Rowland B. Mahany was detailed to proceed to New Haven for the purpose of acting as commissioner of conciliation.

On December 29, 1915, the 2,250 clerks employed in the transportation department of the road filed, through a committee, requests for improved working conditions and increases in pay of approximately 10 per cent, with a further request that the management fix a date to meet the committee and discuss the questions involved. Because of other matters intervening no such meeting was held until March 7, 1916, at which time the company's officials asked for 30 days more time in which to collect data and compile it. This was agreeable to the clerks' committee and acceded to by it.

The next conference, which was the beginning of the real negotiations, was held on April 5, but nothing was accomplished except to arrange for further discussions at a later date. Other meetings were held on April 14 and 15. At these meetings an offer of 5 per cent increase in all positions was made, but all changes asked for in working conditions were refused. The committee rejected this offer and sent for the grand president of their brotherhood, Mr. James J. Forrester.

Mr. Forrester arrived in New Haven on April 22 and on the 24th had a conference with General Manager C. L. Bardo. No further concessions could be obtained, and on April 26 Mr. Forrester authorized the taking of a strike vote. This ballot was completed on May 5 and counted on May 8, resulting as follows:

	Votes.
Against accepting the general manager's offer and in favor of a strike	1,732
In favor of accepting the general manager's offer and against a strike	213
Irregular and blank ballots	15
Total voting	1,960
Not voting	251
	2,211

Percentage in favor of strike, 90 plus.

On May 11 another conference was held at which Mr. Forrester advised the general manager of the result of the vote and notified him that unless the company was willing to make further concessions a strike would be called within a few days. Mr. Bardo declined to add anything to his previous offer, but suggested that the United States Department of Labor be asked to intervene, at the same time advising Mr. Forrester and the committee that he, Mr. Bardo, would at once telegraph the Secretary of Labor for a conciliator.

At Mr. Bardo's request, Mr. Forrester agreed that no strike would be called until after the arrival of the commissioner. The same day telegrams were received advising that Mr. Rowland B. Mahany was assigned to act as conciliator. Mr. Mahany arrived in New Haven on April 13, and from that time until the settlement negotiations were conducted by and through him.

Mr. Forrester, having agreed to hold the strike order in abeyance only until after the arrival of the commissioner, on the evening of May 13 issued an order for a strike to take place at 2 p. m., Wednesday, May 17, a copy of which he served on the general manager. Commissioner Mahany held meetings with both sides jointly and separately, almost hourly, and at about 6 p. m on Tuesday, May 16, succeeded in arranging a settlement, thus averting a strike that would surely have taken place on the following day and would have had a most disastrous effect on the general business of the entire community, as well as seriously interfering with business and industries remote from the seat of the trouble. At 8 p. m. on the same date, by arrangement of the commissioner, a meeting between the officials of the company and the clerks' committee accompanied by Grand President Forrester, and with Mr. Mahany in attendance, was held to work out details. This work was accomplished and a complete settlement reached at 11.30 p. m. to the relief and satisfaction of all parties. This settlement carried with it increases in pay, as per below:

On all positions paying $2 per day or less, 20 cents per day.
From $2 to $2.50 per day, 6 per cent with a minimum of 15 cents per day.
Above $2.50 per day, 5 per cent with a minimum of 15 cents per day.

Taken as a whole the increases secured amount to $147,775 per year, or an average increase of 6 to 8 per cent.

It was agreed that the above increases should date back and become effective as of April 14, thus giving the affected employees five weeks' back pay, which amounted to approximately $15,000 or an average of about $5 each.

Other concessions obtained: It was also agreed that the Saturday half holiday be extended to cover the entire year instead of only the months of May, June, July, August, and September as previously enjoyed.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During May, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 11,453 persons in employment as compared with 7,653 during April, 1916. As there were 17,614 applications for work, 65 per cent were placed in May as compared with 57 per cent in April. The operations of the different offices throughout the country, by months, since May, 1915, when fuller reports began to be made, are contained in the statement following:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, DURING THE MONTHS OF MAY, 1915, TO MAY, 1916.

Month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.	Per cent of applicants placed.
1915.						
May	638	3,826	12,132	3,752	3,495	28.81
June	1,249	3,601	14,530	5,131	4,646	31.98
July	1,160	8,665	18,061	6,360	6,035	33.41
August	1,279	7,931	17,827	7,321	6,757	37.90
September	1,201	4,551	13,334	5,671	5,405	40.54
October	1,104	5,423	12,215	5,460	5,006	40.98
November	847	4,650	11,908	4,459	4,146	34.82
December	698	3,588	11,902	2,622	2,170	18.23
1916.						
January	933	5,063	15,015	4,300	3,419	22.78
February	1,423	6,413	14,257	5,036	4,185	29.35
March	3,443	10,209	19,484	8,113	7,030	36.08
April	3,805	12,104	13,498	8,843	7,653	56.70
May	4,918	21,326	17,614	12,938	11,453	65.02

The following statement of the employment work of the 18 different head offices covering the whole country gives details for the months of April and May, 1916:

SUMMARY OF ACTIVITIES FOR THE MONTHS OF APRIL AND MAY, 1916.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	April.	May.	April.	May.	April.	May.	April.	May.	April.	May.
1. Boston, Mass	4	7	15	1,542	48	75	14	10	11	10
Portland, Me	......	......	......	......	......	......	......	......	......	......
Total	4	7	15	1,542	48	75	14	10	11	10
2. New York, N. Y	278	280	999	1,439	668	1,375	487	804	424	768
Buffalo, N. Y	94	82	1,009	1,050	527	629	515	662	307	462
Total	372	362	2,008	2,489	1,195	2,004	1,002	1,466	731	1,230
3. Philadelphia, Pa	133	116	600	958	329	349	266	294	194	229
Pittsburgh, Pa	21	20	522	418	291	280	128	110	40	89
Total	154	136	1,122	1,376	620	629	394	404	234	318
4. Baltimore, Md	16	14	18	44	94	97	87	153	87	153
5. Norfolk, Va	22	14	50	26	69	100	124	83	79	62

SUMMARY OF ACTIVITIES FOR THE MONTHS OF APRIL AND MAY, 1916—Concluded.

Zone.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	April.	May.	April.	May.	April.	May.	April.	May.	April.	May.
6. Jacksonville, Fla.	......	......	......	......	93	1,008	62	71	13	64
Charleston, S. C.	......	3	......	4	38	307	15	8	15	8
Miami, Fla.	11	6	21	32	56	96	9	34	9	29
Mobile, Ala.	......	2	......	4	14	14	......	......	......	......
Savannah, Ga.	4	3	22	66	55	439	22	66	17	63
Total	15	14	43	106	256	1,864	108	179	54	164
7. New Orleans, La.	3	13	3	15	196	133	12	18	1	8
Gulfport, Miss.	1	3	6	4	38	59	7	......	......	......
Memphis, Tenn.	......	5	......	17	......	63	......	3	......	1
Total	4	21	9	36	234	255	19	21	1	9
8. Galveston, Tex.	1	4	2	11	59	61	21	23	3	7
Amarillo, Tex.	......	......	......	......	......	1	......	......	......	......
Brownsville, Tex.	......	......	......	......	1	1	1	1	......	......
El Paso, Tex.	......	......	......	......	......	1	......	......	......	......
Eagle Pass, Tex.	......	......	......	......	......	......	......	......	......	......
Albuquerque, N. Mex.	......	......	......	......	5	4	......	......	......	......
Houston, Tex.	......	2	......	2	35	29	1	1	1	1
Laredo, Tex.	......	......	......	......	......	......	......	......	......	......
San Angelo, Tex.	......	......	......	......	......	......	......	......	......	......
Total	1	6	2	13	100	97	23	25	4	8
9. Cleveland, Ohio	26	23	34	443	96	100	62	79	25	15
10. Chicago, Ill.	128	203	2,086	1,370	2,138	1,769	1,134	1,036	1,118	1,005
Detroit, Mich.	160	262	824	1,306	402	830	396	814	396	732
Indianapolis, Ind.	103	76	498	241	590	267	522	271	522	264
Saulte Ste. Marie, Mich.	15	15	78	289	47	114	43	106	43	103
Total	406	556	3,486	3,206	3,177	2,980	2,095	2,227	2,079	2,104
11. Minneapolis, Minn.	68	31	76	34	64	53	51	19	51	19
12. St. Louis, Mo.	26	27	158	2,676	179	131	110	65	89	61
Kansas City, Mo.	190	422	309	1,024	698	900	315	781	185	520
Total	216	449	467	3,700	877	1,031	425	846	274	581
13. Denver, Colo.	11	6	29	17	21	29	18	15	7	8
Salt Lake City, Utah	......	......	......	......	2	......	......	......	......	......
Total	11	6	29	17	23	29	18	15	7	8
14. Helena, Mont.	6	2	6	2	3	6	2	2	2	......
Moscow, Idaho	3	1	3	1	4	4	5	4	3	......
Total	9	3	9	3	7	10	7	6	5	......
15. Seattle, Wash.	65	106	132	297	808	810	129	269	123	256
Aberdeen, Wash.	22	15	65	60	245	220	65	60	64	60
Bellingham, Wash.	41	31	96	140	129	104	86	103	78	95
Everett, Wash.	5	8	14	33	48	27	20	11	14	11
Kennewick, Wash.	......	125	......	900	......	850	......	825	......	825
North Yakima, Wash.	331	322	504	484	957	848	481	470	470	447
Spokane, Wash.	75	71	145	138	225	145	132	115	132	115
Takoma, Wash.	205	517	479	1,239	620	844	479	1,085	471	1,069
Walla Walla, Wash.	167	113	228	179	218	305	177	176	176	170
Total	911	1,308	1,663	3,470	3,250	4,153	1,569	3,114	1,528	3,048
16. Portland, Oreg.	982	1,330	1,900	3,128	1,115	1,708	1,584	2,644	1,484	2,404
17. San Francisco, Cal.	277	286	475	665	1,113	1,315	426	481	308	331
18. Los Angeles, Cal.	......	......	......	......	343	134	......	......	......	......
Bakersfield, Cal.	1	2	6	17	8	16	5	16	5	16
San Diego, Cal.	310	350	692	1,011	809	963	830	1,150	686	973
Tucson, Ariz.	......	......	......	......	......	1	......	......	......	......
Total	311	352	698	1,028	1,160	1,114	835	1,166	691	989
Grand total	3,805	4,918	12,104	21,326	13,498	17,614	8,843	12,938	7,653	11,453

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

In the following table data are presented relative to the operations of free public employment offices. Information is furnished for State employment bureaus in 14 States, municipal employment bureaus in 8 States, State-city employment bureaus in 2 States, a city-private employment bureau in 1 State, and a Federal-municipal employment bureau in 1 State. Figures are given for both May, 1915, and May, 1916, in cases where reports have been received for both periods. Certain bureaus reported for May, 1916, only, and in these cases such data are the data presented. A report for April, 1915, and April, 1916, for one bureau received too late for insertion in last month's issue, will also be found in this issue.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL AND MAY, 1915 AND 1916.

State and city.	Number of— Applications from employers.	Persons asked for by employers.	Persons applying for work. New registrations.	Persons applying for work. Renewals.	Persons referred to positions.	Positions filled.
California (municipal):						
Berkeley—						
May, 1915	151	159	100	455	159	159
May, 1916	168	183	101	304	183	183
Sacramento—						
May, 1915	150	255	60	(1)	(1)	255
May, 1916	205	349	86	(1)	(1)	349
California (State-city):						
Los Angeles [2]—						
April, 1915	(1)	(1)	1,991	(1)	(1)	2,570
April, 1916	(1)	4,229	1,732	(1)	4,379	3,784
May, 1915	(1)	(1)	1,704	(1)	(1)	1,800
May, 1916	(1)	5,107	2,962	(1)	5,085	4,531
California (State):						
Oakland—						
May, 1916	584	795	653	94	849	625
Sacramento—						
May, 1916	312	662	626	58	577	518
San Francisco—						
May, 1916	1,145	2,452	2,278	485	2,159	1,718
Colorado (State):						
Colorado Springs—						
May, 1915	(1)	579	(1)	(1)	(1)	570
May, 1916	(1)	724	869	(1)	668	(1)
Denver, No. 1—						
May, 1915	(1)	234	(1)	(1)	(1)	202
May, 1916	(1)	292	351	(1)	236	(1)
Denver, No. 2—						
May, 1915	(1)	258	(1)	(1)	(1)	231
May, 1916	(1)	339	437	(1)	284	(1)
Pueblo—						
May, 1915	(1)	125	(1)	(1)	(1)	125
May, 1916	(1)	539	475	(1)	433	(1)
Connecticut (State):						
Bridgeport—						
May, 1915	406	(1)	(1)	(1)	(1)	355
May, 1916	767	(1)	(1)	(1)	(1)	642
Hartford—						
May, 1915	257	(1)	(1)	(1)	(1)	235
May, 1916	967	(1)	(1)	(1)	(1)	725
New Haven—						
May, 1915	263	(1)	(1)	(1)	(1)	265
May, 1916	924	(1)	(1)	(1)	(1)	722
Norwich—						
May, 1915	40	(1)	(1)	(1)	(1)	35
May, 1916	274	(1)	(1)	(1)	(1)	261

[1] Not reported.

[2] Includes Los Angeles district, 8 counties.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL AND MAY, 1915 AND 1916—Continued.

State and city.	Number of—					
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Connecticut (State)—Concluded.						
Waterbury—						
May, 1915	172	(1)	(1)	(1)	(1)	133
May, 1916	202	(1)	(1)	(1)	(1)	138
Illinois (municipal):						
Chicago—						
May, 1916	[2] 51	930	450	(1)	930	428
Illinois (State):						
Chicago—						
May, 1915	2,785	(1)	[3] 3,906	(1)	(1)	2,016
May, 1916	8,168	(1)	[3] 11,238	(1)	(1)	7,383
East St. Louis—						
May, 1915	524	(1)	[3] 826	(1)	(1)	522
May, 1916	1,500	(1)	[3] 1,864	(1)	(1)	1,235
Peoria—						
May, 1915	781	(1)	[3] 929	(1)	(1)	751
May, 1916	1,663	(1)	[3] 1,119	(1)	(1)	1,117
Springfield—						
May, 1915	270	(1)	[3] 452	(1)	(1)	270
May, 1916	814	(1)	[3] 699	(1)	(1)	606
Rock Island-Moline—						
May, 1915	368	(1)	[3] 535	(1)	(1)	340
May, 1916	738	(1)	[3] 750	(1)	(1)	611
Rockford—						
May, 1915	436	(1)	[3] 575	(1)	(1)	431
May, 1916	1,082	(1)	[3] 857	(1)	(1)	800
Indiana (State):						
Fort Wayne—						
May, 1915	177	235	203	50	253	227
May, 1916	422	774	476	119	595	502
South Bend—						
May, 1915	143	244	332	77	220	193
May, 1916	312	1,032	491	108	573	527
Terre Haute—						
May, 1915	(1)	370	(1)	(1)	382	346
May, 1916	(1)	582	(1)	(1)	523	460
Kansas (State):						
Topeka—						
May, 1915	33	46	60	7	40	28
May, 1916	101	120	132	9	135	111
Kentucky (city—private):						
Louisville—						
May, 1915	(1)	129	393	767	104	65
May, 1916	(1)	479	381	717	329	177
Kentucky (State):						
Louisville—						
May, 1915	53	53	[3] 262	(4)	53	53
May, 1916	204	204	[3] 413	(4)	204	204
Massachusetts (State):						
Boston—						
May, 1915	1,412	1,585	[5] 1,007	(1)	[6] 2,749	1,289
May, 1916	2,999	3,455	[5] 1,758	(1)	[6] 4,818	2,184
Fall River—						
May, 1915	115	118	[5] 19	(1)	[6] 118	108
May, 1916	211	237	[5] 36	(1)	[6] 200	179
Springfield—						
May, 1915	527	573	[5] 224	(1)	[6] 741	462
May, 1916	1,248	1,537	[5] 594	(1)	[6] 1,781	1,128
Worcester—						
May, 1915	607	719	[5] 619	(1)	[6] 983	501
May, 1916	1,219	1,580	[5] 694	(1)	[6] 1,612	823
Michigan (State):						
Battle Creek—						
May, 1916	143	428	(1)	(1)	(1)	198
Bay City—						
May, 1916	207	207	(1)	(1)	(1)	90
Detroit—						
May, 1916	1,120	7,311	(1)	(1)	(1)	6,520

[1] Not reported.
[2] Number of requisitions.
[3] Number applying for work.
[4] Every applicant must register each month.
[5] Number who were registered.
[6] Number of offers of positions.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL AND MAY, 1915 AND 1916—Continued.

State and city.	Number of—					
	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Michigan (State)—Concluded.						
Flint—						
May, 1916	413	1,080	(1)	(1)	(1)	835
Grand Rapids—						
May, 1916	504	1,247	(1)	(1)	(1)	1,160
Jackson—						
May, 1916	419	975	(1)	(1)	(1)	942
Kalamazoo—						
May, 1916	433	550	(1)	(1)	(1)	430
Lansing—						
May, 1916	82	396	(1)	(1)	(1)	194
Muskegon—						
May, 1916	80	277	(1)	(1)	(1)	225
Saginaw—						
May, 1916	148	926	(1)	(1)	(1)	868
Montana (municipal):						
Butte—						
May, 1915	231	(1)	283	(1)	(1)	203
May, 1916	466	(1)	510	(1)	(1)	390
New Jersey (municipal):						
Newark—						
May, 1915	(1)	832	(1)	(1)	1,114	629
May, 1916	(1)	1,690	647	2,653	2,041	1,384
New York (municipal):						
New York City—						
May, 1915	288	358	1,678	....	709	287
May, 1916	2,562	2,985	2,228	....	3,843	2,373
New York (State):						
Albany—						
May, 1916	607	812	539	261	755	404
Brooklyn—						
May, 1916	1,581	2,585	2,002	502	2,663	1,589
Buffalo—						
May, 1916	973	1,215	474	283	1,148	758
Rochester—						
May, 1916	1,373	2,073	819	274	1,587	806
Syracuse—						
May, 1916	1,087	1,299	640	131	1,193	931
Ohio (State-city):						
Akron—						
May, 1915	(1)	616	948	1,871	677	495
May, 1916	(1)	2,174	708	1,435	1,670	1,394
Cincinnati—						
May, 1915	(1)	858	1,888	5,170	977	698
May, 1916	(1)	2,238	1,483	2,687	1,997	1,273
Cleveland—						
May, 1915	(1)	3,631	2,431	6,337	3,405	2,950
May, 1916	(1)	10,904	2,940	8,262	8,462	7,158
Columbus—						
May, 1915	(1)	1,201	739	3,393	1,153	1,045
May, 1916	(1)	2,956	727	2,447	2,670	2,122
Dayton—						
May, 1915	(1)	649	917	2,374	619	504
May, 1916	(1)	1,596	702	1,110	1,298	1,144
Toledo—						
May, 1915	(1)	1,414	1,029	1,989	983	968
May, 1916	(1)	4,532	1,423	2,442	2,840	2,443
Youngstown—						
May, 1915	(1)	555	651	1,348	596	493
May, 1916	(1)	1,356	715	1,240	1,341	1,221
Oklahoma (State):						
Enid—						
May, 1915	(1)	(1)	(1)	(1)	(1)	92
May, 1916	130	(1)	[2] 159	(1)	(1)	123
Muskogee—						
May, 1915	(1)	(1)	(1)	(1)	(1)	90
May, 1916	314	(1)	[2] 183	(1)	(1)	156
Oklahoma City—						
May, 1915	(1)	(1)	(1)	(1)	(1)	154
May, 1916	433	(1)	[2] 365	(1)	(1)	293

[1] Not reported.

[2] Number applying for work.

OPERATIONS OF FREE PUBLIC EMPLOYMENT OFFICES, APRIL AND MAY, 1915 AND 1916—Concluded.

State and city.	Number of— Applications from employers.	Persons asked for by employers.	Persons applying for work. New registrations.	Persons applying for work. Renewals.	Persons referred to positions.	Positions filled.
Oklahoma (State)—Concluded.						
Tulsa—						
May, 1915	(1)	(1)	(1)	(1)	(1)	(1)
May, 1916	742	(1)	[2] 565	(1)	(1)	565
Pennsylvania (State):						
Altoona—						
May, 1916	(1)	233	154	....	91	89
Harrisburg—						
May, 1916	(1)	1,635	375	22	249	238
Johnstown—						
May, 1916	(1)	246	75	7	55	42
Philadelphia—						
May, 1916	(1)	698	889	243	541	309
Pittsburgh—						
May, 1916	(1)	1,114	727	138	477	436
Rhode Island (State):						
Providence—						
May, 1915	456	624	292	198	(1)	624
May, 1916	407	491	337	206	(1)	491
Texas (municipal):						
Dallas—						
May, 1915	28	32	57	26	73	32
May, 1916	182	247	124	62	358	247
Fort Worth—						
May, 1915	86	103	[2] 876	(1)	112	99
May, 1916	156	333	264	69	217	210
Virginia (municipal):						
Richmond—						
May, 1915	113	227	[2] 665	(1)	316	184
May, 1916	234	499	764	(1)	581	381
Washington (Federal-municipal):						
Tacoma—						
May, 1915	261	395	(1)	(1)	399	395
May, 1916	517	1,239	(1)	(1)	1,078	1,089
Washington (municipal):						
Everett—						
May, 1916	(1)	(1)	(1)	(1)	(1)	463
Spokane—						
May, 1915	(1)	(1)	(1)	(1)	732	662
May, 1916	2,260	3,175	(1)	(1)	2,895	2,893
Wisconsin (State):						
La Crosse—						
May, 1915	137	170	[3] 334	(1)	162	89
May, 1916	250	295	[3] 291	(1)	277	180
Milwaukee—						
May, 1915	1,389	1,957	[3] 2,848	(1)	3,056	2,493
May, 1916	2,439	4,269	[3] 3,193	(1)	3,335	2,666
Oshkosh—						
May, 1915	168	224	[3] 363	(1)	193	172
May, 1916	237	314	[3] 253	(1)	212	178
Superior—						
May, 1915	286	349	[3] 619	(1)	428	320
May, 1916	565	1,627	[3] 1,485	(1)	1,535	937

[1] Not reported. [2] Number applying for work. [3] Registrations.

EMPLOYMENT IN SELECTED INDUSTRIES IN MAY, 1916.

Figures collected by correspondence by the Bureau of Labor Statistics are here presented showing the changes in the amount of employment in nearly 500 representative establishments in 10 manufacturing industries between May, 1915, and May, 1916, and between April, 1916, and May, 1916, and also concerning the general changes in the wage rates of employees in these industries since May 1, 1915.

The collection of data of this character was begun in October, 1915, and has been continued since. This information, accurate and closely up to date, is of such decided value to the industries reporting, and of so much public interest, that it is the purpose of the bureau to continue the inquiry from month to month as a regular feature of the bureau's activities.

The number of employees in May, 1916, was greater than in May, 1915, in 8 of the 10 industries covered. The greatest increase shown is in the iron and steel industry, where the number of employees reported on the pay roll was 31.7 per cent greater in May, 1916, than in May, 1915. More money was paid to employees in wages in all the industries covered in May, 1916, than in May, 1915. The greatest increase in the amount of the pay roll was 69.2 per cent, reported for the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MAY, 1915, AND MAY, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for May, both years.	Period of pay roll.	Number on pay roll in May—		Per cent of increase (+) or decrease (−).	Amount of pay roll in May—		Per cent of increase (+) or decrease (−).
				1915	1916		1915	1916	
Boots and shoes	86	66	1 week	48,225	59,234	+22.8	$510,006	$765,206	+50.0
Cotton manufacturing	92	55	...do	55,668	54,778	− 1.6	469,805	521,502	+11.0
Cotton finishing	19	14	...do	10,281	10,467	+ 1.8	114,211	134,878	+18.1
Hosiery and underwear.	82	53	...do	25,414	27,914	+ 9.8	223,363	275,729	+23.4
Woolen	56	44	...do	36,894	41,401	+12.2	368,069	500,583	+36.0
Silk	64	44	2 weeks	17,392	19,129	+10.0	348,408	429,586	+23.3
Men's ready-made clothing.	86	38	1 week	15,308	16,606	+ 8.5	172,073	209,585	+21.8
Iron and steel	142	102	½ month	118,545	156,126	+31.7	3,572,210	6,043,820	+69.2
Car building and repairing.	80	39	...do	38,214	48,457	+26.8	1,077,433	1,577,227	+46.4
Cigar manufacturing	107	69	1 week	11,728	10,799	− 7.9	109,092	113,642	+ 4.2

Comparing April, 1916, and May, 1916, in the next table, 5 of the industries listed show an increase in the number of employees on the pay roll and 5 show a reduction. The greatest increase is 3.5 per cent for the iron and steel industry and the greatest reduction is 3.1 per cent for the cotton finishing industry. All of the industries listed, with the exception of silk and men's ready-made clothing, show that employees received more money in wages in May, 1916, than in April, 1916. The greatest increase, 9.2 per cent, is shown for the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN APRIL, 1916, AND MAY, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for April and May.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
				April, 1916.	May, 1916.		April, 1916.	May, 1916.	
Boots and shoes	86	66	1 week	54,506	53,515	−1.8	$682,024	$696,027	+2.1
Cotton manufacturing	92	55	...do	54,620	54,771	+ .3	496,113	518,520	+4.5
Cotton finishing	19	15	...do	11,490	11,130	−3.1	134,106	142,847	+6.5
Hosiery and underwear	82	55	...do	28,853	29,121	+ .9	271,441	278,576	+2.6
Woolen	56	44	...do	37,384	37,814	+1.2	442,745	471,364	+6.5
Silk	64	47	2 weeks	20,253	19,980	−1.3	447,944	447,437	− .1
Men's ready-made clothing	86	35	1 week	16,654	16,541	− .7	216,880	208,978	−3.6
Iron and steel	142	101	½ month	140,139	145,102	+3.5	5,109,612	5,582,177	+9.2
Car building and repairing	80	38	...do	42,020	42,761	+1.8	1,355,308	1,408,254	+3.9
Cigar manufacturing	107	62	1 week	20,939	20,373	−2.7	214,943	215,660	+ .3

NUMBER ACTUALLY EMPLOYED ON LAST FULL DAY OF PAY PERIOD.

On the blank forms sent to the iron and steel plants two questions have been carried for several months: (*a*) Total number of persons on the pay roll; and (*b*) number actually working on the last full day of the pay period. The figures for these two inquiries, of course, differ in any plant having a shifting force, as the first counts every individual name on the pay roll, including all persons who worked the whole or any part of the pay period; while the second inquiry counts only those who were working on one particular day, the last day of the pay period in which the plant was in operation a full-length day, thus excluding a half-holiday Saturday or other irregular short day when the force might not have been quite normal.

The same two inquiries carried previously in the iron and steel industry were included in the May request for all of the other industries as well and the figures are presented below.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN MAY, 1915, AND MAY, 1916.

Industry.	Establishments reporting for May both years.	Period of pay roll.	Number actually working on last full day of reported pay period in May—		Per cent of increase (+) or decrease (−).
			1915	1916	
Boots and shoes	35	1 week	23,765	27,019	+13.7
Cotton manufacturing	39	...do	26,774	26,791	+ .1
Cotton finishing	11	...do	8,761	9,062	+ 3.4
Hosiery and underwear	13	...do	9,188	9,651	+ 5.0
Woolen	41	...do	25,198	29,616	+17.5
Silk	36	2 weeks	10,939	12,269	+12.2
Men's ready-made clothing	11	1 week	1,259	1,380	+ 9.6
Iron and steel	87	½ month	92,954	123,526	+32.9
Car building and repairing	37	...do	33,904	43,319	+27.8
Cigar manufacturing	44	1 week	11,379	10,881	− 4.4

The percentages of change in the numbers relating to employees between May, 1915, and May, 1916, in the first and third tables shown differ to some extent, yet the general significance of the two sets of figures is on the whole the same. In comparing the figures of the two tables it should be remembered not only that the questions differ in substance but that the last table is based on returns from a considerably smaller number of establishments.

In addition to the data presented in these tables 94 plants in the iron and steel industry reported 120,392 employees actually working on the last full day of the pay period reported for in May, 1916, as against 115,247 reported for in April, 1916, an increase of 4.5 per cent.

A few establishments have informed the bureau that they have reported as the total number of persons on the pay roll the positions occupied, and not the number of individual persons listed, regardless of the number of different individuals taken on to maintain the force; in other words, they have reported the net full force for the pay period, obtaining the figures by dividing the aggregate one-man hours worked in the pay period by the number of days the plant was in operation in the period. Such figures are, of course, the best possible means of indicating the volume of work afforded, but as many establishments do not keep such exact records it was thought inadvisable to ask employers to undertake the labor of keeping the necessary time records and making the computation for such a very accurate report. It is believed that the two inquiries made as to the number of persons on the pay roll and the number employed on the last full day indicate with sufficient accuracy the change in the volume of employment from one pay period to another.

The returns from a few establishments report identical numbers in answer to the two inquiries as to total persons on the pay roll and the number employed on the last full day of the pay period, which figures may be correct, but it is quite improbable in a plant of much size, owing to the shifting of the force caused by some employees leaving and others being hired in their places. It is hoped that correspondents will review the answers to these inquiries closely and make reply in accordance with the intent of each inquiry.

CHANGES IN WAGE RATES SINCE MAY 1, 1915.

The figures in the first table show a decided increase in the amount of money paid out in wages in May, 1916, as compared with May, 1915. In the inquiry sent out for May data, an additional question was included asking what general increases or decreases had been made in rates of wages since May 1, 1915, as distinguished from the totals of the pay rolls, and for the date and extent of such changes in rates. The replies to this inquiry have not been as complete as desired, but the information received shows that decided increases have been made in rates of wages of employees in many lines of industry in the past year.

IRON AND STEEL.

Ninety-one of the 101 establishments in the iron and steel industry reporting announced increases in rates of wages since May 1, 1915; 10 only reported having made none. Seven other establishments reported as to volume of employment, but failed to answer this question. Of these 91, 83 increased wages in May, 1916, and for 71 of the 83 this was at least a second increase during the 13 months period. One establishment reported having advanced its rates every 60 days, with aggregates of from 15 per cent to 30 per cent in the different departments. February, 1916, ranks next to May in increases, 38 establishments reporting advances during that month.

One-half the increases made were of 10 per cent each, with a range in the several increases of from 5 per cent to 30 per cent, aggregating 33 per cent in one establishment where there had been 3 separate advances, and 45 establishments reported 2 increases of 10 per cent each. In nearly every case approximately all the employees of the establishments were affected by the increases, although 3 establishments reported that common labor only was benefited. These increases are not confined to any one district, but have been general in establishments in the Eastern, Middle Western, and Southern States.

COTTON MANUFACTURING.

As industrial conditions are somewhat different in the northern and southern States, statements are given for the two groups separately. Reports were received from 31 northern cotton mills as to whether changes in rates of wages were made during the past year. Of this number every one of the 31 gave a general increase in the last year and 25 gave two general increases. The first of the two general increases in the cotton mills took effect in January, and the second in April or May. Of the 31 mills, 26 gave increases in January. In 31 mills the increase was 5 per cent, in 2 mills 8 per cent, in 1 mill 8½ per cent, in 1 mill 10 per cent, and in 1 mill the percentage of increase varied in the different occupations. Of the 31 mills reporting, all save one made an increase in April or May. In 24 mills the increase was 10 per cent, in 1 mill 8½ per cent, in 1 mill 8 to 10 per cent, in 1 mill 7½ per cent, in 2 mills 5 per cent, and in 1 mill a varying increase.

Of 27 southern mills 7 made a general increase in the last year, and 15 no general increase. Five southern mills to which the inquiry was sent made no report. Of the 7 mills reporting an increase in the year, one gave 2½ per cent advance in May, one an increase for weaving in September, 1915. One reported a general gradual increase for the last six months, one made a 10 per cent increase in April, one an increase of 13½ per cent in May for spinners, one an increase of 5 per cent in April to 30 per cent of its employees, and one reported changes at different times in different departments of from 5 to 10 per cent.

COTTON FINISHING.

The bureau has but few correspondent establishments in cotton finishing. Reports have been received, however, from thirteen establishments, all of which report increases in wages since May 1, 1915. In general, the time of the increases is reported as about the same as for the cotton manufacturing industry, the first increase being early in 1916, and the second in April or May. Nine establishments report increases in both periods, and four in the spring only. The rate of increase varied from 5 per cent to 20 per cent, the spring increase having been greater than the one early in the year.

WOOLEN.

The increases in wages reported in the woolen industry follow as to time, and largely as to extent, the increases reported in the cotton manufacturing and cotton finishing industries, the first period of increase being in January, 1916, and the second period in April or May. Thirty-eight establishments reported increases in both January and May. The increases in January ranged from 5 per cent to 9 per cent, while the increase in April or May was uniformly 10 per cent. One establishment reported a single increase of 10 per cent in May, and one a single increase of 17½ per cent in January, and seven establishments failed to make a report as to increases.

SILK.

In the silk industry 27 of the establishments to which inquiries were sent reported increases in rates of wages, 3 reported reductions in hours with no change in pay, 8 reported no increases, and 8 failed to respond to the inquiry. Of the 27 above mentioned, 14 had made increases as follows: Five establishments increased their rates from 5 to 10 per cent in January; 6 from 10 to 15 per cent in March or April; 2, 5 per cent in May, and 1 had made two advances of $1 per week each to all unskilled labor, one in February and one in May. All of the remaining 13 of the 27 establishments showing increases reported an increase in rates of wages, for the most part of 10 per cent in March or April, and, in addition, a reduction in working hours from 10 to 9 per day, or from 55 to 50 per week. The 3 establishments which reduced the working hours with no change in weekly pay were in effect increasing the rate of wages per hour.

HOSIERY.

In the hosiery industry 13 establishments report some increase, 15 report none, and 30 failed to reply to the inquiry. Of the 11 reporting increases 3 gave increases of 5 per cent in January, 1916, and of 10 per cent in April, one gave an increase of approximately 10½ per cent between January 1 and April 24, one an increase of 10 per cent March 1st, one from 10 per cent to 25 per cent with dates not given, and the remaining 7 report adjustments which they say generally mean advances.

CLOTHING.

No general increases were reported in the men's ready-made clothing industry. Returns were made by 39 establishments; of these 8 had made no increase in rates of wages, 24 did not answer the question, and 7 reported some increases, as follows: One establishment granted a 10 per cent increase to three-quarters of its force in March, one gave a part of its employees a 10 per cent advance in March and to another part a similar advance in May; two establishments reported an increase but gave no data as to time or amount, and three establishments reported a decrease in hours of work in January, with an increase in rates that maintained weekly earnings.

BOOTS AND SHOES.

The wage increases in this industry have been gradual and specific rather than general throughout the industry. Twenty-one factories out of 71 replying reported some increases. These increases for the most part applied to certain operations only, mainly piecework. One of the 21 establishments reported a general increase of 5 per cent in January, and 9 others reported fairly general increases without stating the amount or time. One establishment reported an increase of 8 per cent to timeworkers, being one-quarter of their employees, another 10 to 12 per cent to the same class and same proportion of employees. The remaining 10 out of the 21 did not specify the amount of increases. Sixteen establishments reported having made no increases and 34 others failed to answer the inquiry, presumably having made no increases.

CIGAR MANUFACTURING.

Few changes in wage rates were reported in cigar manufacturing establishments. Of 51 establishments replying to the inquiry, only 5 reported an increase in rates, there having been no changes in the remaining 46. The increases reported were: "About 10 per cent since August, 1915"; "increases aggregating 40 per cent to employees in the stemming department"; "an increase on several brands of cigars in September, 1915"; "a gradual increase"; and "a reduction of one-half hour per day to female timeworkers."

CAR BUILDING AND REPAIRING.

Twenty-one out of 39 car building and repairing shops that made returns reported general increases in rates of wages made during the last year; the remaining 18 have made no material changes.

Three shops in each of two companies reported increases in February, March, or May of from 1 to over 6 per cent; two shops of one company reported increases of 5½ per cent, affecting three-fourths of the men in one shop and 41 per cent of the men in the other; one shop 1½ to 3 cents per hour to timeworkers in April and 4.6 per cent to pieceworkers in February; one shop 6.4 per cent to 61 per cent of the force in April; one shop 6 per cent increase to 40 per cent of the force in February; four shops 1½ to 4 per cent increase in March; five shops reporting an increase did not specify amounts of increases or time when made; and one shop reported a reduction of hours per week from 54 to 50, with no change in weekly pay.

EMPLOYMENT IN THE STATE OF NEW YORK IN MAY, 1916.

A statement concerning manufacturing activity in the State of New York in May, issued by the New York State Industrial Commission, is here reproduced:

> The high record of business activity in the factories of New York State, which was established in April of this year, was almost equaled in May, in spite of the disturbing influence of important strikes in the latter month. This is shown by returns from over 1,400 representative manufacturers with over half a million employees, made to the Bureau of Statistics and Information of the State Industrial Commission. From April to May the total number of employees decreased less than 2 per cent while the total amount of wages paid decreased less than 1 per cent. In May, 1916, there were 17 per cent more people employed and 31 per cent more wages paid than in May, 1915. In all industries the amount of wages paid continues to increase more rapidly than the number of employees.
>
> There was a small decrease from April to May in the number of men employed in the stone, clay, and glass products group. The group as a whole paid 6 per cent more in wages in May than in April. The number of employees in May, 1916, was one-eighth greater and the amount of wages was one-fourth greater than in May, 1915. The number of employees in the metals, machinery, and conveyances group set a new high record in May. Almost 2 per cent more men were employed in this group than were employed in April. Increases were greatest in the manufacture of firearms, tools, and cutlery; brass, copper, and aluminum products; and in automobile factories. The increase in total wages for the entire group was approximately 4 per cent. Increases in total wages paid were greatest in the industries whose increases in the number of employees were most marked. The group as a whole employed three-eighths more workers and paid eleven-twentieths more wages in May, 1916, than in

May, 1915. The decrease of 4 per cent in employees and of 3 per cent in total wages paid by the wood manufactures group from April to May is accounted for very largely by a strike in one of the large planing mills. Every industry in this group, except the one in which the strike occurred, employed from one-tenth to one-fifth more men and paid from one-eighth to three-tenths more in wages in May, 1916, than in May, 1915. The furs, leather, and rubber goods group maintained in May the high record in number of employees which it established in April and exceeded its April record for the total amount of wages paid by over 2 per cent. The group as a whole employed one-fifth more workmen and paid two-fifths more in wages in May, 1916, than in May, 1915. The April record of the number of men employed in the chemicals, oils, and paints group was exceeded in May by nearly 1 per cent. The amount of wages paid in this group in May was over 3 per cent more than in April. Increases in both the number of employees and in wages were most marked in the animal and mineral oil products industry. This group of industries employed over one-fifth more workers and paid nearly one-third more in wages in May, 1916, than in May, 1915. The paper-making industry employed nearly 1 per cent more workers and paid 5 per cent more in wages in May than in April. This industry also employed one-sixth more workers and paid over one-third more wages in May, 1916, than in May, 1915. The printing and paper goods group of industries changed but little from April to May. Fluctuations in the business of a few concerns in this group caused a slight decrease in the total amount of wages paid. The group as a whole employed one-twelfth more people and paid one-tenth more in wages in May, 1916, than in May, 1915. In the textiles group the number of employees decreased over 6 per cent and the total wages decreased 4 per cent from April to May. This decrease occurred chiefly in the knit-goods industry, several of whose plants were on strike in May. This group employed one-twentieth more workers and paid one-fifth more wages in May, 1916, than in May, 1915. The clothing, millinery, and laundering group also experienced a decrease in both employees and in wages from April to May. The greatest decrease occurred in the women's clothing industry, which was disturbed by a strike in May. The decrease of 33 per cent in the number of employees and 42 per cent in wages in this industry accounts for most of the decrease of 8 per cent in employees and 14 per cent in the wages paid in the entire group. Largely because of this strike only 2 per cent more workers were employed and only 11 per cent more wages were paid in this group in May, 1916, than in May, 1915. The food, liquors, and tobacco group experienced a decrease of 2 per cent in the number of employees but maintained the same wage total from April to May. The greatest decrease in the number of employees occurred in the tobacco industry and in the manufacture of ice cream, confectionery, flour, and groceries. This group of industries employed only 2 per cent more people and paid only 11 per cent more in wages in May, 1916, than in May, 1915. The water, light, and power industry experienced a decrease of 3 per cent in the number of employees from April to May but increased the total wages by 1 per cent during the same period. The industry employed 2 per cent fewer people but paid 6 per cent more in wages in May, 1916, than in May, 1915.

PROCEEDINGS OF THE AMERICAN ASSOCIATION OF PUBLIC EMPLOYMENT OFFICES.

Though the existence and the evils of unemployment are generally realized only in times of industrial crisis and depression, the fact remains that a great amount of unemployment exists in the United States, even in the most prosperous times and in the most stable industries. The establishment of public employment offices recognizes not only this fact of unemployment, but also the fact that there is a measure of public responsibility for its causes and of public obligation to provide remedies.

Appreciating the significance of their work and the necessity of coordinating, extending, and improving it, the public employment officials of the country organized at a meeting in Chicago, December 19, 1913, the American Association of Public Employment Offices. The objects of this organization, as set forth in its constitution, are as follows: (1) To improve the efficiency of the public employment offices now in existence; (2) to work for the establishment of such offices in all the States; (3) to secure cooperation and closer connection between the offices in each State and among the States; (4) to promote uniform methods of doing business in all the public employment offices; (5) to secure a regular interchange of information and reports among the various offices; and (6) to secure a proper distribution of labor throughout the country by the cooperation of municipal, State, and Federal governments. All persons connected with Federal, State, provincial, or municipal departments that operate public employment offices are eligible to membership in the association.

Since the Chicago meeting two other meetings have been held by the association, one in Indianapolis, September 24 and 25, 1914, and one in Detroit, July 1 and 2, 1915. At each meeting fundamental principles and practical problems of great interest and importance were discussed, but up to the present time no printed reports of the proceedings have been published. Accordingly, the Bureau of Labor Statistics of the United States Department of Labor has assumed the task of publishing as its Bulletin No. 192 a report of the three conventions. This report is compiled from the written papers of some of the speakers and from the notes of the secretary. As no stenographic reports were taken, all the addresses and discussions could not be reproduced, but those which it is possible to present indicate clearly the scope and value of the work of the association and make available important information regarding the aims, the problems, and the work accomplished by public employment offices.

At the first meeting papers were presented relating to the development of free public employment offices in the United States following the year 1890, when Ohio established the first State offices of that kind in the country; the work of bureaus of employment in France, Austria, Belgium, Denmark, Italy, Switzerland, and Great Britain; the woman's department of a free employment office; the handling of immigrant workers, and the distribution of alien and citizen labor. The resolution respecting the promotion of employment bureaus by the Swiss Federal Government was also presented, and discussions were held regarding the difficulties of conducting free employment offices, how to organize a State system, what records should be kept and how, and the relation of public and private offices.

In an address at the second meeting of the association the United States Commissioner of Labor Statistics emphasized the seriousness of the unemployment problem, the importance of the public employment office as a constructive agency for furnishing real work to real workers, the magnitude of the work accomplished by such officers in the face of great difficulties, the need of complete statistical records, and the necessity of cooperation between the Federal Bureau of Labor Statistics and the State offices. Other papers related to the wrong way to conduct a system of public employment offices; what must be done to make them more effective; policies and methods of employment agencies maintained by employers' associations; regulation and control of private agencies; distribution of labor and the problem of transportation; a plan for gathering and distributing farm hands in grain States, and a woman's employment office. In addition there was a report on the condition and management of public employment offices in the United States, showing wherein some offices had succeeded and others failed, and offering suggestions for increasing their efficiency.

At the third meeting of the association papers were presented on the problems of organizing a State system of employment offices; experiences in extending and improving the work of a public employment office; developing a farm-hand business; the National Farm Labor Exchange; the placing of women by public employment offices; the immigrant worker and the public employment bureau; the immigrant and the industrial world, and vocational guidance and public employment offices. A preliminary report also was made by a "committee on standards," presenting a system of records, registration, and filing, and making recommendations in regard thereto.

Appendixes to the report give the resolutions adopted at each of the three meetings of the association, recent statistics of public employment offices in the United States, Great Britain, and Germany, and a translation of a series of tables with explanatory text, prepared by the German Imperial Statistical Bureau and published in the German Reichs-Arbeitsblatt, showing the present status of unemployment insurance on the basis of official sources and of reports prepared for the general convention at Ghent of the International Association on Unemployment in September, 1913.

Twenty-five States in this country have provided for public employment offices, and already 77 such State offices have been established in 76 cities; 30 municipal public employment offices have been established in 28 cities in 16 States, and 77 Federal employment offices have been established in connection with the Division of Information of the United States Department of Labor in 30 States. A tabular statement shows these bureaus according to their character and location.

UNEMPLOYMENT INSURANCE UNDER THE BRITISH NATIONAL INSURANCE ACT.

The British scheme of insurance against unemployment under the National insurance act, 1911, Part II, and the amendment act of 1914 is administered by the Board of Trade and came into operation July 15, 1912. The objects of the scheme are:

1. Compulsory insurance against unemployment in certain trades described as "insured trades." This involves contributions from all employers and workmen in the insured trades, which are designated below, contributions from the State, and the payment of benefits to the workpeople when unemployed.
2. Encouragement of voluntary insurance against unemployment by money grants from State funds to associations of persons, in all trades and occupations, which pay out-of-work benefits.

COMPULSORILY INSURED TRADES.

The insured trades are:

1. *Building trades.*—Construction, alteration, repair, decoration, or demolition of buildings, including manufacture of wood fittings commonly made in builders' workshops.
2. *Construction of works.*—Construction, reconstruction, or alteration of railroads, docks, harbors, canals, embankments, bridges, piers, or other works of construction.
3. *Shipbuilding.*—Construction, alteration, repair, or decoration of ships, boats, or other craft by persons other than members of ship crews, and manufacture of wood fittings commonly made in shipyards.
4. *Mechanical engineering.*—Including manufacture of ordnance and firearms.
5. *Iron founding*, whether included under foregoing headings or not.
6. *Construction of vehicles.*—Construction, repair, and decoration of vehicles.
7. *Sawmilling* (including machine woodwork) carried on in connection with any other insured trade or of a kind commonly so carried on.

Foremen other than manual workmen, clerks, apprentices, and persons under 16 years of age are excluded. The nature of his work rather than the business of his employer determines whether a workman is or has been in an insured trade. No employer may employ a workman in one of the insured trades who does not have an unemployment book. These books can be obtained from labor exchanges or other local offices of the unemployment fund and are current only for such period, not exceeding 53 weeks, as is specified thereon.

The State contributions must be paid each year and are fixed by the law at one-third of the total net contributions from employers and workmen in insured trades during that year, after deducting the refunds of contributions authorized by law. The treasury may determine the manner and the time such contributions are to be paid.

COLLECTION OF CONTRIBUTIONS FROM EMPLOYERS AND WORKMEN.

Contributions of employers and workmen are paid in the first instance by the employers, who are required to purchase and affix to the workmen's unemployment books unemployment insurance stamps to the value of the joint contributions of employer and workman. The unemployment insurance stamps are obtainable at post offices, but are entirely distinct from postage stamps or from the health insurance stamps issued under Part I of the insurance act. Stamps of three ordinary denominations are on sale, namely, 5d., 4d., and 2d., while stamps of higher denominations may be obtained from the Board of Trade.

After having affixed the stamps the employer may deduct from the workman's wages one-half the value of such stamps. No contributions are required while the workman is out of work or engaged in any other than an insured trade.

UMPIRE TO DECIDE DOUBTFUL CASES.

If there is doubt whether any workman is included in an insured trade information can be obtained from a labor exchange or other local office of the unemployment fund, and if the employer or workman desires he may apply for a definite decision to an umpire appointed by the Crown and acting independently of the Board of Trade.

WORKMEN ONLY PARTLY IN AN INSURED TRADE.

Workmen employed by the same employer partly in and partly not in an insured trade may arrange with the employer to have contributions paid on their account as if they were wholly employed in an insured trade, and will be entitled to benefits accordingly.

CONTRIBUTIONS.

As stated above, contributions are required from all employers and workmen in insured trades and also from the State.

When the workman is 18 years of age or over contributions of 2½d. (5.07 cents) each are required from the employer and the workman, or 5d. (10.14 cents) from both, for every period of employment lasting more than two days but not over a week; 2d. (4.06 cents) from each or 4d. (8.11 cents) from both for every employment period of over one but not over two days; and 1d. (2.03 cents) each or 2d. (4.06 cents) from both for every employment period of not over one day. If the workman is under 18 years of age the contributions required are 1d. (2.03 cents) each or 2d. (4.06 cents) from both for every employment period not exceeding a week.

An employer or workman who fails to pay any of his contributions or refuses to comply with the act or regulations thereunder is liable for each offense to a fine of £10 ($48.67), and in addition, where the offense is failure to pay any contribution, he is liable to the unemployment fund for three times the amount he has refused to pay, not exceeding £5 ($24.33). If an employer convicted of the offense of failing or neglecting to make any contribution is further convicted of failure to pay other contributions in respect of the same workman during the year preceding the date information was laid he is liable to the unemployment fund for the total of such other contributions and can not recover the workman's portion thereof.

CUSTODY OF UNEMPLOYMENT BOOKS.

While the workman is employed his unemployment book is kept by the employer, who must give him reasonable opportunity to inspect the book. When the workman loses his employment the employer must return his book, which the workman must then deposit with a labor exchange or other local office of the unemployment fund.

CONTRIBUTIONS FROM CASUAL WORKMEN.

In ordinary cases, as has been stated, a contribution of 2½d. (5.07 cents) each is required from the employer and the workman for every separate employment period lasting over two days but not over a week. Under this rule a workman having two separate periods of employment in a week, each lasting three days, under different employers, for example, is subject to two contributions—that is, 5d. (10.14 cents)—altogether, and his employers would also have to pay the same amount. On the other hand, if he had been continuously employed for one week by one employer, he and the employer would each have had to pay only 2½d. (5.07 cents).

This to some extent automatically adjusts the premium for insurance to the greater risk, in so far as casual workmen and their employers must pay greater contributions than regular workmen and their employers, though it may be noted that the casual employee under such circumstances gets a proportionately increased claim on the fund.

By a special provision in section 99 of the act, however, casual workmen and their employers may escape the higher contributions and the employer be relieved of the obligation of keeping and stamping unemployment books. This provision authorizes the employer, through the Board of Trade, to make an arrangement with a labor exchange whereby the latter undertakes to keep and stamp on the employer's behalf the unemployment books of workmen engaged through the labor exchange, and whereby all the employment periods of the same or different workmen engaged by that employer through the labor exchange may be treated as a single continuous period of employment of one person. In other words, the employer who uses the labor exchange in this way may pay according to the amount of labor he has, though the employment has been discontinuous and he has not had the same man, and the workman engaged through the labor exchange may pay at the rate of a single contribution for each week of work he does, regardless of the number of separate engagements he may have had.

Employers who thus arrange for a labor exchange to keep and stamp the unemployment books are required to deposit with the Board of Trade a sum sufficient to cover the estimated contributions of both employers and workmen for three months, or such lesser period as may be agreed upon between them and the Board of Trade.

UNEMPLOYMENT FUND.

The unemployment fund is made up of the contributions of employers, workmen, and the State, as above described. From it are paid all claims for unemployment benefit and any other payments authorized under Part II of the act. The fund is controlled and managed by the Board of Trade.

BENEFITS.

Benefits may be obtained by workmen in insured trades either (1) direct from the unemployment fund through a labor exchange or other local branch of the fund, or (2) through an association of workmen which pays unemployment benefits and has arranged with the Board of Trade for a refund under section 105 of the act. In the latter case the members of the association instead of drawing unemployment benefits from a local office under the rules of the unemployment fund may draw benefits from the association, and the association may thereafter recover from the unemployment fund the amount which the workmen would have been entitled to had they made direct claim. The word "association" as here used includes trade-unions paying unemployment benefits.

According to the amendment act of 1914 the Board of Trade shall not make or continue an arrangement such as that just described unless they are satisfied that the total benefit authorized by the association is at least one-third greater than the benefit provided to be paid from the unemployment fund under the original act.

Whether the workman seeks benefits direct from the unemployment fund or through an association he must, on losing his employment, get his unemployment book from the employer and leave it at a labor exchange or other local office of the fund. Notice that the book has been lodged and claim made will be given in every case to the last employer.

If the workman makes direct claim to the fund he must, if living within three miles of the local office, go to that office daily and sign a register during working hours as evidence of unemployment. If, however, he lives over three but not over five miles from the office he is required to attend only on alternate days, and may then sign both for the actual day of attendance and the preceding day. If the distance exceeds five miles he may attend at longer intervals or give such evidence of unemployment as the Board of Trade may direct.

When the workman makes claim through an association he must get a receipt for his book, take it to the association and give such evidence of unemployment as is required by his arrangement with the association. He thereafter draws benefits from the association in accordance with its rules and subsequent settlement of claim is made between the association and the Board of Trade.

In accordance with its provisions no benefits were paid during the first six months after the law went into effect, that is, until January 15, 1913, but the unemployment benefit to be paid from the unemployment fund after that date was placed at 7s. ($1.70) a week for workmen 18 years of age or over, and 3s. 6d. (85 cents) a week for workmen between 17 and 18, while those under 17 can not claim benefits. Benefits can not be obtained for more than 15 weeks in any insurance year or for less than one day, nor can a workman receive more than the proportion of one week's benefit to five contributions paid by him.

WAITING PERIOD.

No benefit is allowed for the first week of unemployment. This "waiting period" plays an important part in the working of the system. If the rule stood by itself it would mean that every time a workman obtained employment, even for a day, he would on again losing employment be disqualified from receiving unemployment benefit for a whole week.

A paragraph in section 107 provides, however, that when two periods of unemployment of not less than two days each are separated by a period of not more than two days involving employment of not more than 24 hours, the two unemployment periods are together treated as a continuous period of unemployment.

The meaning of this can be explained best by an illustration. If a workman has been unemployed four days, then gets work for two days, and again is unemployed four days, he can get benefit for the last two days of the second period. In this case the first two days of the second unemployment period are combined with the first unemployment period of four days to make up the waiting week.

Section 107 also provides that when there are two periods of unemployment of not less than a week each, separated by an interval of not more than six weeks, the two unemployment periods are treated as a continuous period of unemployment. Thus, if a workman has been unemployed six days, then gets work for six weeks, and is again unemployed for six days he can receive benefit for the whole of the second six days, the first unemployment period of six days being considered as the waiting period.

A workman is not considered to be unemployed while employed at a remunerative occupation in an insured trade or while following any other occupation from which he gets pay or profit greater than he would derive from unemployment benefit under the act, unless he has ordinarily followed the other occupation in addition to his employment in an insured trade and outside his working hours in that trade, and his pay from such other occupation is not over £1 ($4.87) a week.

CONDITIONS OF BENEFIT.

In order to receive benefits a workman must prove that not less than 10 contributions have been paid by him; that he has made application for unemployment benefit in the prescribed manner, and since the date of the application has been continuously unemployed; that he is capable of work but unable to obtain suitable employment; and that he has not exhausted his right to unemployment benefit. He is not considered to have failed to meet these conditions if he has declined to accept (1) a situation vacant because of stoppage of work due to a trade dispute; (2) an offer of employment in a district where he was last ordinarily employed at a lower rate or on less favorable conditions than those he ordinarily obtained in his usual employment in that district or would have obtained had he continued to be so employed; (3) or an offer of employment in any other district at a lower rate or on less favorable conditions than those generally observed in such district by agreements between associations of employers and of workmen or, if there is no such agreement, than those generally recognized by good employers.

On the other hand, workmen are not paid unemployment benefit if they unreasonably refuse offers of suitable situations. The situation must, however, be in their own trade and the wages must not be lower and the conditions not worse than those usually prevailing in the trade in the locality where the work is to be done.

DISQUALIFICATION FOR UNEMPLOYMENT BENEFIT.

The following are disqualified from receiving unemployment benefits: (1) A workman who has lost employment by reason of a stoppage of work due to a trade dispute at his place of employment for so long as such stoppage continues or until he gets work elsewhere in an insured trade; (2) a workman who has lost employment through misconduct or voluntarily leaving employment without just cause, for six weeks after so losing employment; (3) a workman while an inmate of any prison, workhouse, or other institution supported by public funds, or while residing temporarily or permanently outside the United Kingdom; (4) a workman receiving sickness or disablement benefit or disablement allowance under Part I of the national insurance act.

DISPUTED CLAIMS.

The decision as to whether a workman is entitled to benefit or not is made in the first instance by an insurance officer appointed by the Board of Trade, subject to the workman's right to appeal to a court of referees, consisting of an "impartial chairman" and one representative each of employers and workmen. From the decision of the court of referees the workman has no appeal, but if the insurance officer disagrees with the recommendation of the court he may carry the matter to the umpire, an officer appointed by the Crown and independent of the Board of Trade, whose decision is final.

REFUND OF CONTRIBUTIONS.

The insurance act originally provided that an employer, in order to get a refund on contributions paid by him in behalf of any workman, must have paid at least 45 such contributions and have had the workman continuously in his service for one year. Under this provision refunds were lost in many cases owing to circumstances over which the employer had no control; for example, when workmen went on strike. The amendment act of 1914 changed this provision so that all that is necessary for the employer to do to get a refund in respect to any workman is to pay 45 contributions or more during the insurance year. This entitles him to a refund of 3s. (73 cents) for each workman for whom he has paid such contributions whether or not the workman has been continuously employed by him.

The Board of Trade may apply this provision to any period less than an insurance year subject to proportionate reduction in the number of contributions and the sum to be refunded.

A workman who has made 500 contributions is entitled on reaching the age of 60 to a refund of the whole of his contributions (but not what his employer and the State have paid over for him), less the amount he may have received as unemployment benefit, with compound interest at 2½ per cent. If he was over 55 years of age when his contributions first became payable the number of weekly contributions required to entitle him to repayment is reduced by 50 for every year or part of a year by which his age at that time exceeded 55.

When it appears to the Board of Trade that there is exceptional unemployment, workmen systematically working short time and their employers may be exempted entirely from paying contributions.

ENCOURAGEMENT OF VOLUNTARY INSURANCE AGAINST UNEMPLOYMENT.

An important feature of the law is found in section 106, relating to money grants from the State (not from the unemployment fund) to aid voluntary insurance against unemployment. By these grants part of the expenditure actually incurred on account of unemployment may be repaid to associations paying benefits to unemployed persons, whether in an insured trade or not. These grants apply only to insurance through associations and no provision is made for direct voluntary insurance of individual workmen. Repayments may not exceed one-sixth of the amount of benefit paid.

The original act provided that any amount by which benefit payments exceeded 12s. ($2.92) a week should be excluded in calculating repayments under the one-sixth rule. This provision was repealed by the amendment act of 1914 and the limit of benefits on which such repayments can be calculated raised to 17s. ($4.14). On benefits exceeding this amount repayments are subject to reduction by the Board of Trade from what they would otherwise amount to under the one-sixth rule.

In the case of associations of workmen in "insured trades" the refund of one-sixth is calculated not on the whole amount of the benefit paid but on what remains after deducting the amount recoverable by the association from the unemployment fund, according to section 105 of the act, as described above under the heading "Benefits."

Thus, for example, if an association of workmen belonging to the "insured trades" pays a total benefit of 13s. ($3.16) per week, of which 7s. ($1.70) is allowed by the State and is recovered from the unemployment fund, the refund it would get under the one-sixth rule would not be one-sixth of 13s. ($3.16), but one-sixth of the balance of 6s. ($1.46), or 1s. (24.33 cents) per week. This with the 7s. ($1.70) recovered from the unemployment fund would amount to a total of 8s. ($1.95) recovered per week.

On the other hand, an association of workmen not belonging to the insured trades, which gives a benefit of 13s. ($3.16), for example, can recover nothing from the unemployment fund, but can recover from the State one-sixth of 13s. ($3.16), or 2s. 2d. (52.73 cents) a week.

The amendment act of 1914 further provides that in associations of workmen in insured trades if the highest weekly benefit authorized is less than 13s. ($3.16) the whole amount recovered from the unemployment fund is not excluded in calculating repayments by State grant, but rather such proportion of the amount recovered as the highest weekly payment is of 13s. ($3.16).

Suppose, for example, an association authorizes unemployment benefits of only 12s. ($2.92) per week. The amount recovered by this association from the unemployment fund in respect to a workman receiving such benefit would be 7s. ($1.70) per week. Under the 1914 amendment just mentioned, however, the additional amount to be repaid by State grant according to the one-sixth rule would not be calculated on the balance of 5s. ($1.22) remaining after deducting the 7s. ($1.70) recovered from 12s. ($2.92), but rather on the amount remaining after deducting twelve-thirteenths of 7s. ($1.70), or 6s. 5½d. ($1.57), from 12s. ($2.92). The remaining amount would thus be 5s. 6½d. ($1.35), and one-sixth of this, or $11\frac{1}{12}$d. (22 cents), would be the amount repaid by State grant. This with the 7s. ($1.70) recovered from the unemployment fund would amount to a total of 7s. $11\frac{1}{12}$d. ($1.92) recovered per week.

Soon after the outbreak of the European war the Government authorized emergency grants to associations in addition to the one-sixth allowed under section 106. To secure these extra grants extra levies in addition to regular contributions are required from members who are 21 years of age and over and are fully employed. Emergency grants may amount to one-sixth or one-third of the expenditures for unemployment benefit, depending on the amount of the levy. The rate of the levy also varies according to the benefit paid. If the weekly unemployment benefit is 13s. ($3.16) or less per week, a weekly levy of 1d. (2.03 cents) is required to obtain an emergency grant of one-sixth, and a levy of 2d. (4.06 cents) to obtain a grant of one-third; if the benefit is over 13s. ($3.16) but not over 15s. ($3.65), a levy of 2d. (4.06 cents) is required to secure a grant of one-sixth, and a levy of 4d. (8.11 cents) to secure a grant of one-third; if the benefit exceeds 15s. ($3.65) but does not exceed 17s. ($4.14), a levy of 3d. (6.08 cents) is required to obtain an emergency grant of one-sixth, and 6d. (12.17 cents) to obtain a grant of one-third. Thus an association paying an unemployment benefit of 17s. ($4.14) per week and levying 6d. (12.17 cents) per week on its members who are fully employed will obtain an emergency grant of one-third of its expenditure on unemployment benefit, which with the one-sixth ordinarily obtainable under section 106 will equal one-half of the association's expenditure. If it levies only 3d. (6.08 cents) per week it will obtain an emergency grant of one-sixth, which with the one-sixth ordinarily obtainable will amount to one-third of its expenditure. Emergency grants are allowed only when associations are suffering from abnormal unemployment and do not pay unemployment benefit of over 17s. ($4.14) a week, and on condition that they agree while receiving such grants to make levies over and above the ordinary contributions on members remaining fully employed.

The following tables, compiled from statements in the Board of Trade Labor Gazette, show, first, the number of workmen insured against unemployment in each group of insured trades at specified dates since the law went into effect, and second, the total number of claims made and the amount of benefits paid from month to month. The figures in these tables are necessarily incomplete, because of lack of official information:

NUMBER OF PERSONS INSURED AGAINST UNEMPLOYMENT UNDER BRITISH NATIONAL INSURANCE ACT OF 1911, AT SPECIFIED DATES, BY TRADES, JULY 27, 1912, TO FEB. 29, 1916.

Date.	Persons insured in—							Total insured.
	Building trades.	Works of construction.	Ship-building.	Engineering and iron founding.	Construction of vehicles.	Saw-milling.	Other industries.	
1912.								
July 27	[1] 740,524	(2)	204,672	696,779	171,065	17,192	71,608	1,901,830
Aug. 31	[1] 806,857	(2)	217,377	731,619	179,779	17,616	76,298	2,029,546
Sept. 28	[1] 845,030	(2)	224,569	746,752	183,446	18,047	76,730	2,094,574
Oct. 26	[1] 893,617	(2)	230,724	763,031	187,574	18,218	77,487	2,170,651
Nov. 30	[1] 918,026	(2)	237,313	779,114	191,290	18,480	78,145	2,222,368
Dec. 28	[1] 931,269	(2)	240,567	787,962	193,550	18,661	78,622	2,250,631
1913.								
Feb. 1	792,553	158,308	248,221	802,094	198,060	18,785	79,305	2,297,326
Mar. 1	[1] 967,321	(2)	254,850	814,930	201,994	18,854	80,750	2,338,699
Mar. 29	[1] 983,154	(2)	259,394	824,691	205,009	18,778	82,247	2,373,273
Apr. 26	[1] 1,002,141	(2)	264,021	836,683	208,470	18,867	83,400	2,413,582
May 31	[1] 1,024,848	(2)	269,749	850,696	212,025	18,973	84,727	2,461,018
June 28	[1] 1,045,698	(2)	273,278	862,672	214,718	19,080	86,046	2,501,492
July 12	861,408	186,260	274,228	865,563	216,028	19,118	86,334	2,508,939
1914.								
Jan. 17	775,755	161,168	260,820	804,527	204,672	11,819	63,563	2,282,324
May 31	[1] 927,117	(2)	260,996	807,169	206,170	11,776	63,030	2,276,258
June 30	[1] 947,685	(2)	262,130	811,288	208,130	11,922	63,744	2,304,899
July 31	[1] 956,890	(2)	264,217	817,931	209,985	12,029	64,546	2,325,598
Aug. 31	[1] 967,374	(2)	265,584	820,850	210,859	12,123	64,718	2,341,508
Sept. 30	[1] 976,921	(2)	272,996	828,988	211,471	12,192	64,743	2,367,311

[1] Including those in works of construction.

(2) Included in building trades.

NUMBER OF PERSONS INSURED AGAINST UNEMPLOYMENT UNDER BRITISH NATIONAL INSURANCE ACT OF 1911, AT SPECIFIED DATES, BY TRADES, JULY 27, 1912, TO FEB. 29, 1916—Concluded.

Date.	Persons insured in—							Total insured.
	Building trades.	Works of construction.	Ship-building.	Engineering and iron founding.	Construction of vehicles.	Saw-milling.	Other industries.	
1914.								
Oct. 31	[1] 985.383	(2)	276,143	838,185	212.370	12,294	64,446	2,388,821
Nov. 30	[1] 926.660	(2)	255,208	771,758	195,326	11,618	59,410	2,219,980
Dec. 31	[1] 889,975	(2)	242,790	730,785	184,720	11,165	56,101	2,115,536
1915.								
Jan. 31	[1] 889,975	(2)	242,790	730,785	184,720	11,165	56,101	2,115,536
Feb. 28	[1] 889,975	(2)	242.790	730,785	184,720	11,165	56,101	2,115,536
Mar. 31	[1] 895,029	(2)	246.027	741,855	186,291	11,257	55,568	2,136,027
Apr. 30	[1] 895.029	(2)	246,027	741,855	186,291	11,257	55,568	2,136,027
May 31	[1] 825,073	(2)	247,745	763,731	183,033	10,246	47,897	2,077,725
June 30	[1] 825,073	(2)	247,745	763,731	183,033	10,246	47,897	2,077,725
July 31	640,947	150,974	242,963	758,093	174,275	9,433	42,998	2,019,683
Aug. 31	640,947	150,974	242,963	758,093	174,275	9,433	42,998	2,019,683
Sept. 30	640,947	150,974	242,963	758,093	174,275	9,433	42,998	2,019.683
Oct. 31	640,947	150,974	242,963	758,093	174,275	9,433	42,998	2,019,683
Nov. 30	577,928	114,155	226,048	804,002	174,139	8,566	47,222	1,952.060
Dec. 31	577,928	114,155	226,048	804,002	174,139	8,566	47,222	1,952.060
1916.								
Jan. 31	550,973	113,427	222,870	846,009	167,075	8,239	43,224	1,951,817
Feb. 29	550,973	113,427	222,870	846,009	167,075	8,239	43,224	1,951,817

[1] Including those in works of construction.

[2] Included in building trades.

PERSONS INSURED AGAINST UNEMPLOYMENT, CLAIMS MADE, AND BENEFITS PAID UNDER PART II OF THE BRITISH NATIONAL INSURANCE ACT OF 1911, AT SPECIFIED PERIODS, JAN. 31, 1913, TO FEB. 25, 1916.

Four weeks ending—	Number insured (at end of specified month).	Claims made.[1]	Benefits paid.	
			Number.	Amount.
1913.				
Jan. 31[2]	2,297,326	165,642	[3] 64,522	[3] $120,572
Feb. 28	2,338,699	87,646	[3] 185,222	[3] 288,287
Mar. 28	3,373,273	65,577	[3] 111,161	[3] 173,033
Apr. 25	2,413,582	63,447	[3] 68,043	[3] 105,389
May 30[4]	2,461,018	74,186	[3] 63,639	[3] 95,763
June 27	2,501,492	68,058	[3] 47,379	[3] 71,095
July 25	2,508,939	68,806	[3] 57,372	[3] 85,295
Aug. 29[4]	(5)	78,229	[3] 70,081	[3] 104,425
Sept. 26	(5)	77,266	85,897	125,176
Oct. 31[4]	(5)	110,242	145,856	206,281
Nov. 28	(5)	92,106	154,079	220,671
Dec. 26	(5)	90,615	168,551	245,247
1914.				
Jan. 30[4]	(5)	163,300	317,704	466,955
Feb. 27	(5)	86,465	211,654	301,903
Mar. 27	(5)	75,183	147,225	206,807
Apr. 24	(5)	63,794	120,535	167,442
May 29[4]	2,276,258	83,884	127,925	174,367
June 26	2,304,899	73,743	(5)	156,390
July 31[4]	2,325,598	103,730	(5)	213,956
Aug. 28	2,341,508	180,233	(5)	229,154
Sept. 25	2,367,311	133,692	(5)	384,142
Oct. 30[4]	2,388,821	124,730	(5)	345,278
Nov. 27	2,219,980	76,656	(5)	196,373
Dec. 24	2,115,536	56,049	(5)	151,445

[1] Including both claims for direct payment of benefits and claims for payment through associations which have made arrangements with the Board of Trade under section 105 of the National Insurance Act, 1911.

[2] Jan. 8 to Jan. 31.

[3] Not including benefits due through associations.

[4] Five weeks.

[5] Not reported.

PERSONS INSURED AGAINST UNEMPLOYMENT, CLAIMS MADE, AND BENEFITS PAID UNDER PART II OF THE BRITISH NATIONAL INSURANCE ACT OF 1911, AT SPECIFIED PERIODS, JAN. 31, 1913, TO FEB. 25, 1916—Concluded.

Four weeks ending—	Number insured (at end of specified month).	Claims made.	Benefits paid.	
			Number.	Amount.
1915.				
Jan. 29[1]	2,115,536	73,395	(2)	$200,743
Feb. 26	2,115,536	43,113	(2)	106,635
Mar. 26	2,136,027	32,916	(2)	61,240
Apr. 30[1]	2,136,027	33,538	(2)	48,884
May 28	2,077,725	23,434	(2)	30,599
June 25	2,077,725	22,867	(2)	26,824
July 30[1]	2,019,683	31,179	(2)	33,871
Aug. 27	2,019,683	21,663	(2)	29,024
Sept. 24	2,019,683	22,329	(2)	26,883
Oct. 29[1]	2,019,683	27,195	(2)	32,703
Nov. 26	1,952,060	21,316	(2)	28,634
Dec. 31[1]	1,952,060	27,765	(2)	46,767
1916.				
Jan. 28	1,951,817	20,359	(2)	50,806
Feb. 25	1,951,817	16,959	(2)	34,221

[1] Five weeks.

[2] Not reported.

Of the total benefits the larger amount is paid directly from the unemployment fund. Thus, in 1914 the per cent of benefit paid directly ranged from 63 per cent in June and October to 71 per cent in February. The corresponding benefits paid through associations in 1914 and repayable to them from the unemployment fund ranged from 29 to 37 per cent of the total. In 1915 the proportionate amount of benefits paid directly from the unemployment fund was somewhat smaller than in 1914, ranging from 53 per cent in June to 64 per cent in March. In January and February, 1916, 53 per cent of the total amount of benefits was paid directly from the unemployment fund, and 47 per cent through associations.

In connection with various methods proposed for encouraging economy and savings among the British people, in order to meet the conditions growing out of the European war, the suggestion has recently been made[1] that in the national insurance act of 1911 the Government already possesses statutory power to deal effectively with this problem as respects the working classes. The scheme of compulsory unemployment insurance already in effect under this act can be used as a means of promoting thrift and increasing savings among working people and at the same time as a method of bringing to these classes the very important advantage of more general protection against unemployment, a large amount of which is anticipated when the war ends and the Government's war expenditure of four or five million pounds a day ceases.

In the period of nearly four years since the insurance law went into effect much distress has been prevented and a large unemployment fund has been accumulated. The scheme has worked smoothly and has commanded the approval of both employers and workmen. So far, however, compulsory insurance against unemployment has been limited to certain specified trades, which include about 25 per cent of male wage earners and only 3 per cent of female wage earners, or altogether only about one-fifth of the whole number of working people in the United Kingdom.

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[1] New Statesman, Apr. 15, 1916, pp. 29, 30.

Instead of this small proportion practically all working people could be protected and their savings, it is claimed, could be increased six or seven million pounds a year by simply extending the existing scheme of compulsory unemployment insurance under the law. It is pointed out that this extension could be accomplished by the mere issuing of a treasury order, that the machinery for working the scheme already exists and its expansion would call only for additional clerical help, and that the time is opportune because most employers are making unusual profits, unemployment is at a minimum, and organizations of working people are disposed to favor any scheme that will help to meet the strain at the close of the war.

The extension of the scheme, it is stated, would greatly facilitate the task of the Government's "reconstruction committee" in providing for "labor after the war," and it would mean a great deal to the entire nation to know that in any future crisis all its wage earners and not merely the small proportion now protected would have the assurance of benefits amounting to at least 7s. ($1.70) a week each if thrown out of work.

EMPLOYMENT MANAGERS' CONFERENCES, BOSTON, MAY 10, 1916.

BY RALPH G. WELLS, SECRETARY, EMPLOYMENT MANAGERS' ASSOCIATION.

Employment men from all parts of New England met in Boston on May 10 to attend the conference of employment managers and directors of personnel held under the auspices of the Employment Managers' Association of Boston. The program included as speakers men of recognized prominence in business affairs, who had had actual experience in creating or managing successful employment departments in large organizations.

Probably the most significant feature of the conference was the emphasis placed by the speakers on the importance and value of the functionalized employment department as an essential factor in commercial and industrial success. The entire conference was significant of the latest developments in modern methods of management, which regard personnel problems of as much importance as sales, finances, and production, and as deserving of the expert attention of a competent executive with sufficient authority who has the confidence of the management.

The response to the invitations to the conference indicated strikingly the widespread interest in the subject. The majority of those in attendance were employment executives and were accompanied in many cases by the managers or proprietors of the concerns.

The object of the conference was to bring together those active in the work for the purpose of interchanging ideas and experiences. There was also a realization that in many establishments there are men who are endeavoring to work out alone similar problems and who would appreciate the opportunity of such a meeting, for there is a lack of adequate literature or other recognized sources of information to which the individual may turn when he desires to secure the benefit of experiences other than his own. In fact, one of the chief advantages of such a conference is to crystallize the best thought of the moment into definite form, that it may be available for others who have not had the opportunity of coming in contact with those of more experience.

The question of "hiring and firing" is not new, and for years many of the principal firms have had employment departments, but only within the last four years have business men realized that the subject deserved detailed study and was possessed of such surprising possibilities of improvement and development.

The program of the conference given below illustrates well the progress that has been made in placing the movement on a practical basis and is proof that the functionalized personnel department is no longer an academic proposal but an accepted fundamental in successful business organization.

PROGRAM.

Employment Managers' Conference, Boston, Wednesday, May 10.

Luncheon, 1 p. m., President C. M. Lawrence presiding.

Conference, 2 p. m., four 15-minute papers, each followed by an informal discussion, W. S. Fields presiding.

"Sources of supply and means of getting in touch with them," H. B. Coho, United States Cartridge Co.

"Selection and examination of employees," Dale G. Steely, W. F. Schrafft & Sons (Corp.).

"Training, promotion, transfer, discharge," J. M. Larkin, Fore River Shipbuilding Corporation.

"Records and filing systems for employment departments," W. C. Swallow, Amoskeag Manufacturing Co.

Banquet, 6.30 p. m., President Charles M. Lawrence presiding; James P. Munroe, toastmaster.

"Selection and development of employees," T. K. Cory, Wm. Filene's Sons Co.

"Improving the efficiency and quality of the personnel, H. G. Smith, general manager Fore River Shipbuilding Corporation.

"Methods of reducing the labor turnover, Henry S. Dennison, treasurer Dennison Manufacturing Co.

"The employment department, its functions and scope," H. L. Gardner, Cheney Bros., employment manager.

The conference opened with a luncheon at the Boston City Club, Charles M. Lawrence, president of the Employment Managers' Association, presiding. There were addresses of welcome and congratulation by A. Lincoln Filene, of Wm. Filene's Sons Co.; Meyer Bloomfield, of the Vocation Bureau; Hon. Edwin Mulready; and Ethelbert Stewart, of the United States Bureau of Labor Statistics, who pointed out that there was a lack of uniform methods of keeping records of labor turnover and suggested that statistics showing the turnover by departments were more valuable than figures for the entire plant, but even these were not equal to records of the turnover of each individual job. If in a foundry 50 are quitting from one job while 5 are quitting from another, this fact would not be developed by a record from a department or the plant as a whole. When one knows how many are leaving each job it is possible to determine just the cause of the turnover at that point and take steps which will remedy conditions. Every employment man owes it to himself to find out just why men quit, so that he may guard against losses due to such conditions.

The first paper on the subject of "Sources of supply" was read by H. B. Coho, business director of the United States Cartridge Co. In opening, Mr. Smith emphasized the necessity of the employment manager being a man of broad experience, with an accurate knowledge of the business. He not only should have the confidence of the management but also should have a thorough understanding with his superior officers as to just what his responsibilities and authorities are. An excellent plan is to hold meetings of the overseers at least once a week so that they may offer criticisms and suggestions to the employment manager. However, in any event it is always advisable to set a standard scale of wages which will attract the better classes of help. Far more important than this is the favorable influence of consistent management and attractive working conditions, as there seems to be nothing which secures loyalty and support so much as absolutely consistent management. Anything which encourages employees to talk about the plant outside of working hours, especially if they speak favorably of working conditions, is of great assistance in attracting to the doors the right kind of applicants from which to fill vacancies. He suggested as one means of this the various forms of employees' organizations, baseball clubs, bowling clubs, social events, and features of a similar nature.

One of the principal sources of supply for the average plant is the friends and relatives of people already on the pay roll. Where it is necessary to go outside of the immediate vicinity, conditions should be represented accurately, so that the new employee will not be disappointed. Employment managers should get together and arrange some basis, fair to both employer and employee, upon which employees could be engaged while working for other concerns. There should be a definite understanding as to how much notice should be given. Mr. Coho favored strongly a waiting list of old employees and of applicants. He also considered it necessary to promote from within the ranks wherever possible, suggesting that competitive examinations be held whereby employees could be given tests which would demonstrate their fitness for certain positions.

Dale G. Steely, of W. F. Schrafft & Sons, opened the discussion on "Selection, training, and development of employees" by saying that there were from 6 to 10 points which should be considered in selecting help—namely, physical qualification, adaptation, mental attitude toward the job, honesty, industry, intelligence, health, neatness, cleanliness, and temperament. The character and needs of each business must determine the sequence in which these qualities are valued.

Philip J. Reilly, of the Dennison Manufacturing Co., outlined his system of job analysis. Mr. Reilly said that the information secured from the analysis of each job was:

Job number and designation.
Brief description of job.
Time required to learn job.
Previous training or experience necessary.
Starting wage.
Next advance.
Wage limit (that is, not a hard and fast limit, but representing the maximum earnings of the majority).
Age.
Height.
Weight.
Posture (whether the work requires the man or girl to stand, sit, stoop, or walk).
Motion.
Hands (especially in fine paper-box making small neat hands are required).
Eyesight.
Schooling necessary.
Whether the job entails lay offs or overtime.

This information materially assists the employment department in making wise selections. It enables them to give the applicant a clear idea of what the work is. These analyses also encourage the opening up of channels of promotion from "blind alley" jobs so that employees will not be held indefinitely on such jobs at relatively low wages.

H. L. Gardner, of Cheney Bros., then took up the "Psychological tests" which his concern has used for the past year. These are not used for the selection of ordinary labor, being confined strictly to the choice of men and women for positions requiring certain mental qualifications. From seven to eight hours are occupied in making the average tests. They include:

General intelligence.
Speed.
Accuracy.
Quickness of perception.
Imagination.
General education.
Inventive genius.
Mathematical ability.
Mechanical ability.
Any other tests that are needed to discover specific qualifications.

There have been a few instances where men were chosen for other reasons in spite of failure to pass the tests, but in nearly every case the results have been disappointing, as a man who does not show mechanical ability in a test will not develop mechanical ability on the job. This is true of other qualifications.

J. M. Larkin, of the Fore River Shipbuilding Corporation, described apprenticeship classes which have been organized for nineteen different trades in the plant, presided over by practical men from the shops. In some cases, college men are taken into the works, started at a low rate of pay, and put through the various branches of the work from the bottom up. The policy of promoting from within the ranks was a large factor in reducing the turnover, as the constant bringing in of men from the outside for the better jobs discourages the employees. It is absolutely necessary that employment men should interview every employee before he leaves the plant. First, for the purpose of finding out the cause of the turnover and, second, because they may be needed in some other part of the works.

W. L. Shaw, of W. H. McElwain Co., said that one of the sources of difficulty in training, promotion, transfer, and proper management of employees lies in the improperly or incompletely trained foreman or assistant foreman, and explained the plan which had been adopted by his organization for bringing about better results. The number of departments in each factory were reduced from about 10 to 4 departments. Broader and more experienced foremen were placed in charge of these, and care was taken that these men should be "big leaders" rather than "little bosses." These men have under them an executive foreman who devotes his entire time to the administrative detail of the department. In each department there is a carefully trained and selected staff of assistants, who spend part of their time on nonproductive labor and part of their time as substitute operatives.

This entire staff is taken into the company counsels by having them attend foremen's dinners and discussions. In other words, every productive department is organized in such a way that the foreman will not become a detail man but be free to handle properly the employees of his department. Everything is done to enlarge the viewpoint of the staff and to emphasize the importance of abandoning the old idea of personal domination and adopting the art of impersonal management and accomplishment.

The paper of W. C. Swallow, of the Amoskeag Manufacturing Co., dealt with employment records and filing systems. He emphasized the necessity of accurate records which would work without causing friction or involving excessive red tape. Records should be kept of people as they come and go with enough information so that they can be looked up readily if they apply for reemployment. He discussed the topic of application blanks, employment passes or certificates of employment, pay roll systems, inquiry blanks and individual folders for employees' records.

An important point brought out in the discussion was that certain firms have developed a system of keeping track of the expense of errors whereby the employee is required to sign for the expense resulting from his error, although this amount is not deducted from his wages. The employee is impressed with the importance of the error by this and these expense records are filed in his individual folder for future reference.

At the evening session, J. P. Munroe, of the Munroe Felt & Paper Co., presided.

T. K. Cory, of Wm. Filene's Sons Co., said, in part:

> Industry should safeguard itself by drawing a middle line between the extremely high class persons and the extremely low class persons. Then it can safely assume that anything above the middle line is fairly good material to start with. We have not so many employees but so many positions to fill, and if each is carefully defined and outlined it is much easier to select the right person to fill it. An employee is an investment rather than an expense and should be safeguarded as such. His health and happiness are big assets, and it is one of the biggest functions of the employment manager to look after these.

Mr. Cory considered the education of employees of more importance than original selection. The education not only develops people along the right lines but should also determine their fitness for various positions, so as to avoid loss which occurs if the person is discharged because of inability to do one certain job. Many times persons holding minor positions have splendid executive ability if given a big enough job. Understudies are as important in industry and commerce as in the theatrical world. Young college men are good material from which to develop executives, although it is necessary to know how to make the transition for them from the artificial atmosphere of college to the practical life in business.

H. G. Smith, of the Fore River Shipbuilding Corporation, spoke on improving the efficiency and quality of personnel. In the first part of his address he told of a report on employment matters which had been submitted by a committee of departmental heads of his organization who had visited a number of large manufacturing plants in the Middle West for the purpose of studying employment methods in use there. This report was sent to every man occupying an executive position in the plant with the request for comments, criticisms, and suggestions. From the replies to this request there was drawn up a final summary in the form of a report, which led to a number of important changes in their system. In this it seemed to be the unanimous opinion that a new employment bureau should be established on a much higher plane than had been done before. Another conclusion was that when men seek employment in large numbers, a quick selection should be made so that those outside will not have to wait a long time. Applicants waiting should be properly seated and room provided where interviews can be held freely and satisfactorily. Physical examination for all new employees was urged, together with the suggestion that those who did not pass this examination should be given proper advice as to how to bring themselves up to the standard. It was deemed essential that the man in charge of the employment work be one who is naturally courteous himself so that there would be no need of rules for guidance along this line.

H. L. Gardner, of Cheney Bros., dealt with "The employment department, its functions, and scope." He said in part:

> The superintendent who does the hiring and firing under the old system can not have the time to attend to his regular duties and still give proper attention to the selection of employees. There is immense economic loss in actual dollars and cents due to promiscuous employment methods. I have yet to hear of a single establishment which has installed a central employment department that has not found it a great improvement over any other system.
>
> The functions of the employment department are:
>
> First. To secure, by advertising and other standard methods, the necessary applicants.
>
> Second. To weed out undesirables by a personal interview, by searching physical examination, or by reference to former employers.
>
> Third. To select employees who are physically and mentally equipped for the position.
>
> Fourth and fifth. To have complete and up-to-date records of service of every employee, his wage-earning record, etc.
>
> Sixth. To act as a clearing house for the transfer and promotion of employees.
>
> Seventh. To make regular reports on transfer, wage-earning records, and routine work.
>
> Eighth. To make such special studies, reports, or recommendations as may be required for the interests of the concern.

In conclusion, Mr. Gardner said that the establishing of an employment bureau is too often believed to necessitate stripping the foreman or superintendent of authority, prestige, and discipline. So drastic a course is seldom necessary and rarely possible. A foreman's authority need not be curtailed in the slightest degree unless his treatment of employees can not bear the light of investigation.

H. S. Dennison, of the Dennison Manufacturing Co., who spoke on methods of reducing turnover, after dwelling upon the importance of the employment department and the need of having a man of ability in charge, took up the question of labor turnover, saying, in part:

> We fail to realize that the employee is a capital asset simply because the treasurer does not have to write a check for a certain amount to replace that asset after it has been lost. To conserve this asset, you have in the first place your choice of applicants. In choosing men, job specifications are of very great assistance and importance. As the second feature, I urge that the employment manager get into the works freely and often. For the next 50 years three-quarters of the work of the employment manager will be education, instruction, and fitting people to their jobs. A very large proportion of the drop-outs are among those who have been employed a short time. We appreciate too little the discouragement that goes with placing the beginner along side of the highly skilled worker. I urge that the fitness of the employee be determined early and not be postponed. If you are going to shift him anyway, shift him early. Wage increases are easily forgotten in the first few months, when they are more important than at any other time. Among the causes of industrial difficulty a great deal of blame can be laid upon the tactless foreman, and plans to educate foremen for foremanship should be undertaken. This can be done by having meetings where cases reported to the employment manager can be discussed. A skilled workman is not always a good foreman. The man who can do things well himself does not always have patience with the shortcomings of others.

Mr. Dennison also took up the question of irregular employment, due in a measure to the fluctuations of industries, both seasonal and cyclical, and the serious effects of unemployment due to depressions, which at their worst make hoboes and always deteriorate a man and injure his future earning ability. Seasonal unemployment has ten times the chance of betterment. There are methods of regularizing seasonal industry, such as getting orders early, making stock goods or parts of goods in dull seasons, and fitting employees for more than one kind of work.

Following this there were addresses by Robert C. Clothier, of the Curtis Publishing Co.; Joseph Mayper, of the United States Chamber of Commerce; Hon. James Logan, of Worcester; and C. H. Hood, who summarized much of the discussion of the evening in this way:

> Select with the greatest care the best and only the best. After you have selected the best, then instruct them so that they are thoroughly instructed and put upon them all the responsibility that they can carry. Responsibility develops.
>
> Next, promote from the ranks, and in promoting, or at the time of promoting, you must again select and instruct. You must give as careful instruction now as when you began.

> Have employees' councils. Let your employees come to the councils and let them be heard. If possible let them go to the management. Do not let a man leave without an interview with the proper party. Lastly, let me say that poor men never leave; do not let good men get away.

The full proceedings of the conference will later be placed at the disposal of the United States Bureau of Labor Statistics to be published as a bulletin.

STRIKES AND LOCKOUTS, DECEMBER, 1915, TO MAY, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months December, 1915, to May, 1916, inclusive, was 1,432. The number similarly compiled during the calendar year 1915 was 1,405.

The following table shows the number of strikes and lockouts begun in each of the months of December, 1915, to May, 1916, inclusive, together with 108 strikes and lockouts reported as having occurred during the period, although the month in which they began was not reported. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, DECEMBER, 1915, TO APRIL, 1916, INCLUSIVE.

Kind of dispute.	December.	January.	February.	March.	April.	May.	Month not stated.	Total.
Strikes	70	151	156	209	295	396	101	1,378
Lockouts	8	8	5	8	10	8	7	54
Total	78	159	161	217	305	404	108	1,432

The column for May includes disputes that began in the month of May only. During this month 71 other disputes were reported, which either began in preceding months or the date of beginning was not given; the former have been distributed in the preceding columns, the latter added in the column entitled "Month not stated." More detailed accounts of the disputes reported for each month from December, 1915, to April, 1916, may be found in the numbers of the REVIEW relating to those months.

DISPUTES REPORTED DURING MAY, 1916.

The strikes during May were especially numerous, and the number of persons engaged in them was exceptionally large. The most prominent probably was that in the clothing industry in New York, which started with a lockout of 30,000 employees on the first of May and was answered by a strike of 30,000 others two days later. While the number of strikes in the metal trades, the clothing industry, and among the railroad employees has not perceptibly increased over the number reported during the preceding month, and the number of seamen's strikes shows a marked diminution, the number of strikes in the building trades, of miners, longshoremen, and workers belonging to the less skilled classes is especially noticeable. The number of persons on strike in New York City during the first week of May aggregated 100,000 and in Chicago 25,000. Among the more prominent strikes of the month may be mentioned those of the building trades in New York and St. Louis, the street railway employees in Pittsburgh, the marine engineers in New York City, the tanners, molders, and garment workers in Chicago, the coal miners in various parts of Pennsylvania over the interpretation of the recently made contracts, and the railroad section hands in the eastern States, while those brought to an end during the month were the strikes at the International Harvester Company in Chicago and at the Westinghouse plants in Pittsburgh and of the shovelers in Springfield, Mass.

The data in the following tables relate to 475 strikes and lockouts concerning which information was received by the bureau during the month of May. These include, in addition to the 396 strikes and 8 lockouts which began in May, 65 strikes and 6 lockouts which were reported during the month, but began as follows: 33 strikes and 4 lockouts in April, 1 strike in March, 1 strike in January, and 30 strikes and 2 lockouts the dates of commencement of which were not reported, but most of which probably occurred in April or May. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for May will show a material increase over the number of strikes herein reported for that month.

Of the disputes reported during May, 13 strikes and 2 lockouts occurred east of the Mississippi and south of the Ohio and Potomac Rivers, 62 strikes and 2 lockouts west of the Mississippi, and the remaining 386 strikes and 10 lockouts in the territory north of the Ohio and Potomac and east of the Mississippi. More than three-fourths of these strikes occurred in seven States.

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS WERE REPORTED DURING MAY, 1916.

State.	Strikes.	Lock-outs.	Total.
Pennsylvania	90		90
New York	74	2	76
Ohio	51	3	54
New Jersey	46	1	47
Massachusetts	42	2	44
Illinois	33		33
Connecticut	17		17
Washington	13		13
Nebraska	12		12
Maryland	9		9
Michigan	8	1	9
California	7		7
West Virginia	7		7
Missouri	5		5
Rhode Island	5		5
21 other States	42	5	47
Total	461	14	475

Fifteen of these strikes were confined to women and 10 strikes and 1 lockout included both men and women. In 36 strikes and 1 lockout the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING MAY, 1916.

Industry.	Strikes.	Lock-outs.	Total.
Building trades	66	3	69
Metal trades	64	4	68
Mining	52		52
Longshoremen and freight handlers	27		27
Clothing industries	23	1	24
Iron and steel mills	21		21
Railroads	20		20
Textile workers	20		20
Laborers	16		16
Woodworkers	14	1	15
Seamen and marine engineers	10		10
Bakers	6	3	9
Teamsters	7	1	8
Cigar makers	6		6
Quarrying and stone working	6		6
Rubber workers	6		6
Street railways	6		6
Pottery	5		5
Printing trades	5		5
Paper workers	4		4
All others	77	1	78
Total	461	14	475

Included in the above are 44 strikes and 3 lockouts of machinists and 14 strikes of molders, 16 strikes of carpenters, 11 of painters, 9 of structural-iron workers, 12 of mule drivers in coal mines, 15 of railroad section hands, and 8 of weavers.

In 247 strikes and 9 lockouts the employees were connected with unions; in 27 strikes and 2 lockouts they were not so connected; and in 3 strikes they were not connected with unions at the time of striking, but organized themselves into unions during the course of the strike; in the remaining 184 strikes and 3 lockouts it was not stated whether the strikers had union affiliations or not.

In 396 cases the causes of the strikes and lockouts were given. In 86 per cent of these the question of wages or hours, or both, was a leading issue. The principal causes are shown in the following table:

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING MAY, 1916.

Cause.	Strikes.	Lockouts.	Total.
For increase of wages	184	7	191
For decrease of hours	14		14
For increase of wages and decrease of hours	72		72
General conditions	2		2
Conditions and wages	4		4
Conditions and hours	1		1
Recognition and closed shop	4	1	5
Recognition and wages	9		9
Recognition and hours	3		3
Recognition, wages, and hours	7	1	8
Because of discharge of employees	20	1	21
Because nonunion men were employed	6		6
In regard to the agreement	6		6
Jurisdictional	2		2
Sympathy	9		9
For overdue wages	3		3
Over interpretation of 8-hour clause	27		27
Miscellaneous	12	1	13
Not reported	76	3	79
Total	461	14	475

In 260 of the strikes the number of persons involved was reported to be 279,523, an average of 1,075 per strike. In 51 strikes, in each of which the number involved was over 1,000, the strikers numbered 229,550 persons, thus leaving 49,973 involved in the remaining 209 strikes, or an average of 239 to each. In 9 lockouts the number of employees involved was reported to be 36,799, an average of 4,089 per lockout. In 7 lockouts, in each of which the number involved was less than 1,000, the number involved was reported to be 799, or an average of 114 to each.

In 323 strikes and 8 lockouts only 1 employer was concerned in each disturbance; in 19 strikes, 2 employers; in 22 strikes and 3 lockouts, more than 2; and in 97 strikes and 3 lockouts, the number of employers was not stated.

Of 141 strikes reported as ending in May, 41 were won; 26 lost; 51, most of which dealt mainly with wages, were compromised; while in 9 the strikers returned to work under promise of the employer to arbitrate the matters in dispute. Three lockouts were lost to the employer and 2 were compromised. In 14 strikes and 2 lockouts the results were not given. The duration of 127 of these strikes was given as follows: One day or less, 23; 2 days, 10; 3 days, 14; 4 to 7 days, 26; 1 to 2 weeks, 28; 2 to 3 weeks, 11; 3 to 4 weeks, 6; 4 weeks to 3 months, 7; over 6 months, 2. Omitting the last two mentioned, the duration of the remaining 125 strikes was 1,239 days, or an average of 10 days each. Omitting 1 lockout which lasted for 7 months, the duration of the remaining 5 lockouts which ended in May was 57 days, or an average of 11 days each.

UNION SCALE OF WAGES AND HOURS OF LABOR, MAY 1, 1915.

The union scales of wages and hours of labor prevailing in May, 1915, in 89 of the principal trades in 47 of the leading cities of the United States are published in Bulletin No. 194, just issued by the Bureau of Labor Statistics. The scales shown are those of the baking, brewing, building, freight handling, stone, metal, millwork, printing, soft-drink, and teaming trades.

The average rate of wages per week for all cities taken collectively was higher on May 1, 1915, than on May 1, 1914, for 44 of the trades reported; in 44 trades there was no change, and in only 1 trade was it lower.

Considering some of the more important trades, the following increases in weekly rates of pay between May, 1914, and May, 1915, are noted: Bakers, 1 per cent; beer bottlers, 3 per cent; carpenters, 1 per cent; hod carriers, 1 per cent; inside wiremen, 1 per cent; plumbers and gas fitters, 1 per cent; slate and tile roofers, 4 per cent; steam fitters, 2 per cent; painters (hardwood finishers), 4 per cent; electrotypers (battery men and builders), 3 per cent; electrotypers (finishers and molders), 2 per cent; compositors (book and job), 1 per cent; web pressmen (newspaper), 1 per cent.

Considering rates of wages per hour as distinguished from rates per week, 47 trades showed an increase, 42 no change, and for none was the rate lower.

The highest scales per hour paid in May, 1915, in a few of the principal trades were as follows: Bricklayers, 87.5 cents, in Dallas, Houston, and San Francisco; carpenters, 65 cents, in Chicago and Kansas City; portable and hoisting engineers, 75 cents, in Chicago, St. Louis, and San Francisco; hod carriers, 50 cents, in Portland, St. Louis, Salt Lake City, San Francisco, and Spokane; inside wiremen, 75 cents, in St. Louis; painters, 70 cents, in Chicago; plasterers, 87.5 cents, in Dallas, Houston, and San Francisco; plumbers and gas fitters, 75 cents, in Birmingham, Chicago, Dallas, Houston, Portland, St. Louis, Salt Lake City, San Francisco, and Seattle; stonecutters, 70 cents, in Portland and San Francisco; structural-iron workers, 70 cents, in Cleveland and Indianapolis; granite cutters, 68.8 cents, in New York, Salt Lake City, San Francisco, and Seattle; linotype operators (Hebrew, book and job), 83.3 cents, in New York; compositors (English, newspaper), daywork, 75 cents, in Seattle.

As to changes in hours of labor, 19 trades showed a reduction of hours between May, 1914, and May, 1915, 70 reported no change, and none reported an increase.

In 1915 the union scales in the baking trade show hours in some localities as low as 48 per week, but generally they are higher. The building and stone trades in a great majority of the cities covered have an 8-hour day and most of these trades also have a Saturday half holiday either for the whole year or part of the year.

The hours of labor in the metal trades range from 44 to 60 per week, 54 being the predominant hours. The printing trades in the book and job offices have an 8-hour day in nearly all the cities covered, and in the newspaper offices all trades have an 8-hour day or less.

The bulletin further shows by index numbers (percentages) the relative change between 1907 and 1915 in union wages and hours of labor as compared with retail prices of food, and in the purchasing power of wages as measured by food. The index numbers of wages and prices, with 1907 as 100, are as follows:

INDEX NUMBERS OF UNION WAGE RATES AND HOURS OF LABOR AND OF RETAIL PRICES OF FOOD, 1907 TO 1915.

Year.	Rates of wages per hour.	Full-time hours per week.	Rates of wages per week, full time.	Retail prices of food.
1907	100	100	100	100
1908	101	100	101	103
1909	102	99	102	108
1910	105	99	104	113
1911	107	98	105	112
1912	109	98	107	119
1913	111	98	109	122
1914	114	97	111	125
1915	114	97	112	124

With each item in 1907 taken as 100 per cent, rates of wages per hour in 1915 had advanced to 114, rates of wages per week to 112, and retail prices of food to 124, and hours had decreased to 97 per cent of what they were in 1907.

While wages and food both advanced between 1907 and 1915, the advance in the retail prices of food having been the greater, the purchasing power of wages as measured in food diminished during the period. This is brought out in a table showing index numbers of the purchasing power of union wages as measured in food, 1907 to 1915, 1907 again being taken as the base or 100.

INDEX NUMBERS OF PURCHASING POWER OF UNION WAGES AS MEASURED IN FOOD, 1907 TO 1915.

Year.	Purchasing power, measured by retail prices of food—	
	Of rates of wages per hour.	Of rates of wages per week, full time.
1907	100	100
1908	99	98
1909	95	94
1910	93	92
1911	95	94
1912	91	90
1913	91	90
1914	91	89
1915	92	90

From 1907 to 1912 the amount of food purchasable with an hour's wages and a week's wages decreased 9 per cent and 10 per cent, respectively. Since 1912 the food-purchasing power of wages has remained practically unchanged.

WAGES AND HOURS OF LABOR IN THE COTTON, WOOLEN, AND SILK INDUSTRIES.

Rates of wages per hour and hours per week in the leading occupations of the cotton, woolen, and silk industries, from 1907 to 1914, and full-time weekly earnings from 1910 to 1914 are shown in Bulletin 190 of the Bureau of Labor Statistics. The information upon which the report is based was obtained from the records of representative establishments in the States in which these industries are important. The report includes data relating to approximately 93,000 employees in the cotton industry, 40,000 in the woolen industry, and 22,000 in the silk industry.

For several years there has been a general tendency toward shorter hours and higher wages in the three industries.

In cotton goods manufacturing (not including finishing) the average hours per week in 1914 were 1 per cent lower than in 1912 and 1913, and 3 per cent lower than in 1910 and 1911; the average hourly rate of wages in 1914 was 2 per cent higher than in 1913, 3 per cent higher than in 1912, and 14 per cent higher than in 1910 and 1911; and the full-time weekly earnings in 1914 were 1 per cent higher than in 1913, 2 per cent higher than in 1912, and 11 per cent higher than in 1910 and 1911.

In woolen and worsted goods manufacturing the average hours per week in 1914 were 2 per cent lower than in 1912 and 1913, 4 per cent lower than in 1911, and 3 per cent lower than in 1910; the average hourly rate of wages in 1914 was 2 per cent higher than in 1913, 1 per cent higher than in 1912, and 14 per cent higher than in 1910 and 1911; and the full-time weekly earnings in 1914 were the same as in 1913; 2 per cent lower than in 1912, and 9 per cent higher than in 1910 and 1911.

In silk goods manufacturing the average hours per week in 1914 were 2 per cent lower than in 1912 and 1913, and 3 per cent lower than in 1910 and 1911; the average rate of wages per hour in 1914 was the same as in 1913, 6 per cent higher than in 1912, 11 per cent higher than in 1911, and 12 per cent higher than in 1910; and the full-time weekly earnings in 1914 were 2 per cent less than in 1913, 3 per cent higher than in 1912, 6 per cent higher than in 1911, and 7 per cent higher than in 1910.

There was a wide range in the average full-time weekly earnings in the several occupations in each industry, the range in cotton goods manufacturing being from $6.41 for trimmers or inspectors (female), to $15.95 for mule spinners (male); in woolen and worsted goods the range was from $6.53 for combers (female) to $17.22 for loom fixers (male); and in silk goods manufacturing the range was from $5.80 for doublers (female) to $19.65 for warpers (male).

The average full-time weekly earnings in 1914 in some of the principal occupations were as follows:

Cotton goods:	
Card strippers, male	$8.06
Fine speeders, male	9.04
Fine speeders, female	8.61
Loom fixers, male	13.09
Spinners, frame, male	8.37
Spinners, frame, female	7.45
Weavers, male	9.93
Weavers, female	9.30
Woolen and worsted goods:	
Burlers, female	8.41
Laborers, dye house, male	8.74
Loom fixers, male	17.22
Menders, female	10.56
Spinners, frame, female	7.95
Spinners, mule, male	14.03
Weavers, male	13.10
Weavers, female	11.06
Silk goods:	
Laborers, dye house, male	12.12
Loom fixers, male	17.92
Warpers, female	10.99
Weavers, broad silk, male	13.31
Weavers, broad silk, female	10.58
Weavers, ribbon, male	16.05
Weavers, ribbon, female	13.14
Winders, hard silk, female	6.54
Winders, soft silk, female	8.14

The bulletin also contains data relating to the fluctuations of employment in the industries, based on the number of days plants were in operation, the number of employees, and the amount of pay rolls for each pay period during a given year. Employment in the cotton industry did not vary greatly from month to month, and no well-defined dull or active seasons were indicated during the period covered; the silk industry showed some variation at different seasons; in the woolen industry employment fell off greatly in the summer months, rising during the winter months, and reaching the maximum in the early spring.

In cotton manufacturing during the year ending March 28, 1914, employment as measured by the pay rolls was lowest in the two biweekly periods ending January 3, 1914, and August 30, 1913, when the pay rolls were 88 and 89 per cent, respectively, of the average pay roll for the year; the maximum of 106 per cent was reached in the two weeks ending December 20, 1913. In cotton finishing pay rolls varied from 86 per cent of the year's average in the two weeks ending June 7, 1913, to 111 per cent in the two weeks ending November 8, 1913.

In the silk industry figures for the year ending October 31, 1914, show a comparatively busy season from February to May, 1914, and a dull season in October, 1914. The smallest pay roll for any biweekly period, however, was in that ending January 10, 1914, being 83 per cent of the average for the year, and the largest, 111 per cent, in the two weeks ending April 4, 1914.

In the woolen industry during the year ending March 28, 1914, the pay rolls varied from a minimum of 44 per cent of the yearly average in the week ending July 12, 1913, to a maximum of 128 per cent in the week ending March 28, 1914.

RETAIL PRICES OF FOOD IN THE UNITED STATES IN MARCH AND APRIL.

Reports to the Bureau of Labor Statistics from approximately 725 retail dealers in 44 of the principal industrial cities of the United States show that for the month from March 15 to April 15 the retail price of the principal articles of food as a whole increased 2 per cent.

The first table presented below shows the average retail price of the several commodities covered by the inquiry, on March 15 and April 15, 1916, together with relative retail prices which indicate the per cent the average prices in each month were of the average prices for the year 1915.

All meats show an increase, several of them 3 per cent; hens and lard each show an increase of 4 per cent, butter 3 per cent, while onions and sugar show a decided increase, 8 and 6 per cent, respectively. Eggs, cheese, and potatoes were the only articles showing a decrease, that of eggs being the greatest, 5 per cent. Nine articles showed no change in price.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MARCH 15 AND APRIL 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price.		Relative price (average price for the year 1915=100).	
		Mar. 15, 1916.	Apr. 15, 1916.	Mar. 15, 1916.	Apr. 15, 1916.
Sirloin steak	Pound	$0.263	$0.268	103	105
Round steak	do	.233	.239	102	105
Rib roast	do	.204	.210	102	105
Chuck roast	do	.164	.169	102	105
Plate boiling beef	do	.124	.128	102	105
Pork chops	do	.219	.226	108	111
Bacon, smoked	do	.281	.284	103	104
Ham, smoked	do	.276	.284	107	110
Lard, pure	do	.152	.158	103	107
Hens	do	.229	.237	110	114
Salmon, canned	do	.202	.202	101	101
Eggs, strictly fresh	Dozen	.281	.268	84	80
Butter, creamery	Pound	.407	.418	113	116
Cheese	do	.249	.247	108	107
Milk, fresh	Quart	.090	.090	100	100
Flour, wheat	⅛ barrel bag	.953	.953	95	95
Corn meal	Pound	.031	.031	99	99
Rice	do	.091	.091	100	100
Potatoes	Peck	.360	.355	157	155
Onions	Pound	.045	.048	128	138
Beans, navy	do	.092	.092	119	120
Prunes	do	.131	.131	98	98
Raisins, seeded	do	.127	.127	101	101
Sugar, granulated	do	.075	.080	114	121
Coffee	do	.302	.302	100	100
Tea	do	.552	.552	100	100
All articles combined				105	107

The next table compares the prices on April 15 each year from 1912 to 1916.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON APRIL 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of April in each year was of the average price for the year 1915.]

Article.	Unit.	Average money price, Apr. 15—					Relative price, Apr. 15 (average for the year 1915=100)—				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.219	$0.253	$0.253	$0.250	$0.268	86	99	99	98	105
Round steak	do	.189	.221	.228	.221	.239	83	97	100	97	105
Rib roast	do	.180	.200	.200	.196	.210	90	100	100	98	106
Chuck roast	do			.167	.158	.169			104	98	106
Plate boiling beef	do			.124	.122	.128			102	100	105
Pork chops	do	.191	.218	.218	.197	.226	94	107	107	97	111
Bacon, smoked	do	.240	.271	.271	.268	.284	88	99	99	98	104
Ham, smoked	do	.235	.263	.263	.251	.284	91	102	102	97	110
Lard, pure	do	.141	.158	.157	.151	.158	95	107	106	102	107
Hens	do	.206	.223	.231	.214	.237	99	107	111	103	114
Salmon, canned	do				.200	.202				100	101
Eggs, strictly fresh	Dozen	.258	.248	.251	.258	.268	77	74	75	77	80
Butter, creamery	Pound	.378	.407	.331	.364	.418	105	113	92	101	116
Cheese	do				.231	.247				100	107
Milk, fresh	Quart	.087	.090	.091	.090	.090	97	100	101	100	100
Flour, wheat	⅛-barrel bag.	.843	.803	.793	1.094	.953	84	80	79	109	95
Corn meal	Pound	.029	.028	.030	.032	.031	92	90	95	101	99
Rice	do				.091	.091				100	100
Potatoes	Peck	.468	.225	.273	.222	.355	204	98	119	97	156
Onions	Pound				.036	.048				104	138
Beans, navy	do				.076	.092				99	120
Prunes	do				.135	.131				101	98
Raisins, seeded	do				.126	.127				100	101
Sugar, granulated	do	.065	.053	.050	.067	.080	98	81	76	101	121
Coffee	do				.302	.302				100	100
Tea	do				.552	.552				100	100
All articles combined							**95**	**96**	**95**	**97**	**107**

All articles for which figures are available were higher in April, 1916, than in April, 1912, with the exception of potatoes. Nineteen articles were higher in April, 1916, than in April, 1915, potatoes, with an increase of 60 per cent, having the widest variation. Onions increased 33 per cent, beans 21 per cent, butter 15 per cent, pork chops 14 per cent, and hens 11 per cent.

From the last line of the table it is seen that food as a whole advanced 10 per cent between April, 1915, and April, 1916, while the increase from April, 1914, to April, 1915, was 2 per cent. April, 1913, shows a slightly higher average than that shown in April, 1912 or 1914.

RETAIL PRICES IN FOREIGN COUNTRIES.

Prices of meat in Vienna, Austria, show exceptionally large increases since the beginning of the war. Beef, fore quarter, has advanced from 6.3 cents a pound, minimum, in February, 1914, to 38.7 cents in February, 1916, or an increase of 514 per cent—the largest advance shown among five kinds of meat. Cabbage and spinach show decreases in price from January, 1914, to January, 1916. The increases in the maximum prices quoted have generally not been so sharp as those in the minimum quotations.

In Canada the cost per week of a family budget of staple foods in terms of the average prices in certain cities increased from an average of $7.73 in 1914 to $7.87 in 1915, or an advance of 1.8 per cent. The price in April, 1916, was $8.34 or 7.9 per cent higher than the average for 1914.

The cost of a year's supply of necessaries, food, fuel and lighting, for a family of four persons in France in terms of the average prices in cities of over 10,000 population (not including Paris) was 23.1 per cent higher during the third quarter of 1915, the latest data available, than during the third quarter of 1914. It was 21.1 per cent higher than during the first quarter of 1913.

Price quotations for Berlin, Germany, obtainable for this summary of foreign prices, are almost all for meat—11 out of 15 quotations. Prices of pork of different kinds, and of butter, lard, and potatoes are fixed maximum prices. In the case of lard the maximum price one week in February, 1916, was 205 per cent over the average competitive price of February, 1914. Disregarding maximum price quotations, it appears that the highest advance during the two-year period, February, 1914, to February, 1916, was 163 per cent in the case of mutton (breast, flank); the lowest, or 100 per cent, in the case of veal cutlets (loin).

On May 1 the increase in the retail prices of food in Great Britain since the beginning of the war was 55 per cent. This percentage makes allowance for the relative importance of the various articles in working-class expenditures. The greatest increase, or 152 per cent, is noted in the case of sugar; the lowest, or 17 per cent, in the case of oleomargarine.

Compared with the average price in 1912, the price of wheat bread in Italy was 21.2 per cent higher in February, 1916; the price of beef, 36.6 per cent; macaroni, spaghetti, etc., 32.6 per cent; bacon, 31.7 per cent; wheat flour, 28.5 per cent; table oil, 15 per cent; and milk, 9.5 per cent.

In the Netherlands the average price of 29 commodities combined increased 58 per cent in March, 1916, over the general level of 1893. The highest increase for any one commodity was 150 per cent in the case of soda; 128 per cent for cooking butter; 121 per cent for white beans. Decreases are shown for coffee and salt.

From the outbreak of the war to February 1916, the food expenses of an average workingman's family in Copenhagen, Denmark, are estimated as having increased approximately 34 per cent; other expenses, 16 per cent; and both classes of expenses combined, 24 per cent.

In Norway prices of 27 household necessaries were 63 per cent higher in February, 1916, than in 1911. Individual commodities showed great variations, coke being 147 per cent higher and rye flour 105 per cent. The increase in prices in Christiania in January, 1916, over those prevailing in the first half of 1914 was practically 34 per cent.

The cost per year in Stockholm, Sweden, of a family budget of staple foods, fuel, and lighting in terms of the average monthly prices increased 23.6 per cent in 1915 over 1913 and 20.7 per cent over 1914. It was 49 per cent higher in 1915 than in 1904. For the country, as a whole, based on average monthly prices, brown beans increased 123.9 per cent in price in February, 1916, over February, 1914; yellow peas, 80.6 per cent; salt herring, 73.9 per cent; and pork sides, 68.7 per cent.

Since June 1, 1914, 26 out of 29 articles of household consumption in Zurich, Switzerland, showed increases in price of from 3 to 175 per cent over March 1, 1916. The maximum increase was attained by barley, followed by hulled oats (141 per cent), oatmeal (138 per cent), and beans (136 per cent).

AUSTRIA (VIENNA).

Retail prices of food in the markets of Vienna have been taken from the Neue Freie Presse, issues of January 4 and March 1, 1914, January 3 and February 28, 1915, and January 9 and February 27, 1916. These tables show the average retail prices of 16 commodities on a certain day of each of the months of January and February, 1914, 1915, and 1916.

RETAIL PRICES OF FOOD IN VIENNA MARKETS.

[Source: Neue Freie Presse, Jan. 4 and Mar. 1, 1914, Jan. 3 and Feb. 28, 1915, Jan. 9 and Feb. 27, 1916.]

Article.	Unit.	Jan. 3, 1914.	Jan. 2, 1915.	Jan. 8, 1916.	Feb. 28, 1914.
Beef:		*Cents.*	*Cents.*	*Cents.*	*Cents.*
Fore quarter	Pound	7.4-18.0	11.0-20.6	29.5-48.8	6.3-16.6
Hind quarter	...do	9.2-20.3	13.3-22.1	35.0-51.6	7.4-20.3
Beefsteak	...do	16.6-23.9	17.3-23.0	49.7-58.9	12.9-21.2
Veal	...do	8.7-20.3	16.6-23.9	33.1-40.5	8.1-16.6
Pork	...do	13.8-20.3	18.4-23.9	40.5-55.2	12.5-20.3
Cabbage:					
White	Each	1.6- 6.1	2.8- 6.0	1.4-4.9	....
Red	...do	2.3- 7.3	3.2- 6.5	4.1-12.2	....
Lemons	Dozen	9.7-14.6	9.7-14.6	19.5-29.2	....
Potatoes	Bushel	44.2-66.3	66.3-88.4	88.4	....
Onions	Pound	1.5- 2.0	3.3- 4.2	5.5- 6.3	....
Beans	...do	....	....	10.1-12.9	....
Sauerkraut	...do	1.8- 2.2	2.6- 2.9	4.4	....
Spinach	...do	6.4-11.0	7.3- 7.9	7.1- 7.5	....
Butter	...do	15.8-37.9	30.2-45.7	66.3-75.1	....
Eggs, fresh	Dozen	25.6-34.8	37.5-44.3	40.6-54.1	....

RETAIL PRICES OF FOOD IN VIENNA MARKETS—Concluded.

Article.	Unit.	Feb. 27, 1915.	Feb. 26, 1916.	Per cent increase (minimum prices).		Per cent increase (maximum prices).	
				Jan., 1916, over Jan., 1914.	Feb., 1916, over Feb., 1914.	Jan., 1916, over Jan., 1914.	Feb., 1916, over Feb., 1914.
Beef:		*Cents.*	*Cents.*				
Fore quarter	Pound	12.9- 22.1	38.7-51.6	289.6	514.3	171.1	210.8
Hind quarter	...do	18.4- 24.9	42.4-55.2	280.4	473.0	154.2	171.9
Beefsteak	...do	20.8- 25.8	55.2-62.6	199.4	327.9	146.4	195.3
Veal	...do	18.0- 23.9	36.8-40.5	280.5	354.3	99.5	144.0
Pork	...do	19.3- 29.5	47.0-51.9	193.5	276.0	171.9	155.7
Cabbage:							
White	Each	2.4- 8.9	1.4- 6.1	[1] 12.5	....	[1] 19.7	....
Red	...do	4.1- 10.2	11.4-17.3	78.3	....	67.1	....
Lemons	Dozen	9.7- 12.2	19.5-24.4	101.0	....	71.8	....
Potatoes	Bushel	71.9-110.5	88.4	100.0	....	33.3	....
Onions	Pound	3.9- 6.3	3.7- 6.3	266.7	....	215.0	....
Beans	...do	13.8- 18.4	12.9	....	....	....	....
Sauerkraut	...do	2.9- 3.5	4.6	144.4	....	100.0	....
Spinach	...do	5.5- 12.0	8.3- 8.8	10.9	....	[1] 31.8	....
Butter	...do	27.3- 44.9	66.3-77.3	319.6	....	97.9	....
Eggs, fresh	Dozen	32.5- 40.6	32.5-34.8	58.6	....	55.5	....

[1] Decrease

CANADA.

The Canadian Labor Gazette for May, 1916, reports as follows on the movement of retail prices in April:

> In retail prices the cost of a list of staple foods stood at $8.34 in April as compared with $8.36 in March, $7.79 in April, 1915, and $7.50 in April, 1914. The chief changes for the month were decreases in eggs and butter, owing to the advance of season, and a steep rise in sugar. Flour, however, was lower. Beef, veal, mutton, pork, bacon, lard, old cheese, rice, beans, and potatoes showed slight advances. Rents averaged slightly higher in New Brunswick and Ontario. As compared with April, 1915, all commodities in the list were higher except milk, bread, flour, and rolled oats. Rent averaged slightly higher than a year ago, but lower than in 1914.

The table which follows shows the cost of a week's supply of 29 staple foods in terms of the average prices in certain cities in each Province of Canada.

COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS IN TERMS OF THE AVERAGE PRICES OF THE CITIES IN EACH PROVINCE.

Province.	1910	1911	1912	1913	1914	1915	April, 1914	April, 1915	March, 1916	April, 1916
Nova Scotia	$6.817	$6.776	$7.166	$7.289	$7.475	$7.826	$7.278	$7.393	$8.531	$8.518
Prince Edward Island	5.812	5.795	6.107	6.338	6.693	6.617	6.510	6.612	7.446	7.456
New Brunswick	6.548	6.836	7.130	7.041	7.443	7.682	7.204	7.565	8.437	8.410
Quebec	6.331	6.457	6.968	6.870	7.158	7.387	7.035	7.169	8.142	8.032
Ontario	6.504	6.666	7.251	7.203	7.479	7.676	7.287	7.399	8.322	8.295
Manitoba	7.462	7.405	7.884	7.873	8.149	8.071	7.970	7.934	8.507	8.543
Saskatchewan	7.859	8.083	8.164	8.250	8.327	8.299	8.027	8.332	8.463	8.302
Alberta	7.998	8.081	8.147	8.327	8.266	8.209	7.973	8.326	8.401	8.259
British Columbia	8.321	8.789	9.028	9.128	7.606	8.807	9.128	8.898	8.719	8.498
Total (all provinces)	6.954	7.138	7.339	7.337	7.731	7.866	7.505	7.793	8.360	8.342

DENMARK (COPENHAGEN).

The Danish statistical office has made four special inquiries concerning the increase in the cost of living in Copenhagen consequent upon the war. The most recent inquiry in that respect relates to February, 1916. Based upon budgetary studies made by the statistical office during the year 1910 the cost of a household budget of an average workingman's family is ascertained in terms of the current prices for any particular month, and comparisons made for different periods. On this basis the statistical office calculates that, from the outbreak of the war to February, 1916, the food expenses of an average workingman's family have increased approximately 34 per cent and other expenses about 16 per cent, the total average increase being about 24 per cent. The results of the four investigations on the increase in the cost of living since the outbreak of the war are set forth in the following statement:

RELATIVE COST OF LIVING FOR WORKINGMAN'S FAMILY IN COPENHAGEN AT INDICATED PERIODS SINCE THE OUTBREAK OF THE WAR.

Date.	Food.	Other expenditures.	Total.
July, 1914	100	100	100
July, 1915	128	106	116
October, 1915	132	109	120
February, 1916	134	116	124

FRANCE.

In continuation of a study on the cost of living in France published by E. Levasseur,[1] the late president of the French superior council of statistics, the French statistical office (Statistique Générale de la France) began in the first volume (1911) of its bulletin the publication of "index" numbers of retail prices in French cities. These "index" numbers are computed on the basis of reports of the mayors of French cities with a population of over 10,000 inhabitants (not including Paris) showing the retail prices for 13 principal articles of consumption, including foods, fuel, and lighting.

Based on budgets showing the amounts consumed yearly by a workman's family of four persons living in Paris, as adopted by the statistical office in its study, "Salaires et coût de l'existence jusqu'en 1910," the 13 articles included in the "index" numbers were weighted as follows:

Bread	700 kilograms (1,543.2 pounds)
Meat	200 kilograms (440.9 pounds)
Lard	20 kilograms (44.1 pounds)

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[1] Levasseur, E. Le cout de la vie; enquête sur le prix des denrées alimentaires dans 70 lycées. Brussels, 1909.

Butter	20 kilograms (44.1 pounds)
Eggs	20 dozens.
Milk	300 litres (317.0 quarts)
Cheese	20 kilograms (44.1 pounds)
Potatoes	250 kilograms (551.2 pounds)
Beans	30 kilograms (66.1 pounds)
Sugar	20 kilograms (44.1 pounds)
Oil, table	10 kilograms (22.0 pounds)
Petroleum	30 liters (31.7 quarts)
Alcohol, fuel	10 liters (10.6 quarts)

The prices obtained in the individual cities for each article were multiplied by the respective quantities shown above and the products added. The results so obtained are, therefore, really not index numbers, but statements of the probable cost in francs of a family budget expressed in terms of the average retail prices at any particular period of time which may be selected.

Below are shown the "index" numbers for all France and for certain geographical divisions at indicated periods of time, as reported in the January–February, 1916, issue of the Bulletin du Ministère du Travail et de la Prévoyance Sociale, page 69.

COST PER YEAR IN DOLLARS OF A FAMILY BUDGET OF 13 STAPLE ARTICLES OF FOOD, FUEL AND LIGHTING IN TERMS OF THE AVERAGE RETAIL PRICES IN FRENCH CITIES OF OVER 10,000 INHABITANTS, BY GEOGRAPHICAL DIVISIONS AND FOR ALL FRANCE AT INDICATED PERIODS OF TIME, 1911-1915.

Period.	All France.	Geographical divisions.				
		North.	East.	Southeast.	South.	West.
First quarter, 1911	$195.70	$204.39	$193.39	$212.88	$195.90	$191.65
First quarter, 1913	194.93	201.30	190.88	199.95	200.33	190.11
Third quarter, 1914	193.77	212.11	190.68	196.47	190.68	181.81
First quarter, 1915	213.46	223.88	213.46	215.20	210.37	205.74
Third quarter, 1915	238.36	246.85	232.57	237.58	243.37	231.02

GERMANY (BERLIN).

In compiling retail prices for Berlin use was made of the *Vossische Zeitung*—issue of March 2, 1916—which carries the retail prices reported by the statistical office of Berlin. The table which follows gives prices for February, 1914, 1915, and 1916.

RETAIL PRICES OF FOOD IN THE MUNICIPAL MARKETS OF BERLIN.

[Sources: Vossische Zeitung, No. 114, Mar. 2, 1916, and Preiszusammenstellungen des Statistischen Amts der Stadt, Berlin, February, 1915.]

Article.	Unit.	February, 1914, (average for the month).	Week Feb. 22-27, 1915.	Week Feb. 21-26, 1916.	Per cent increase, February, 1916, over February, 1914.
Beef:		*Cents.*	*Cents.*	*Cents.*	
Sirloin, round steak, rump	Pound	22.0	22.9	48.2	119.1
Breast	do	18.4	19.0	46.0	150.0
Veal:					
Cutlets, loin	do	22.5	22.0	45.1	100.4
Breast	do	18.6	20.3	43.6	134.4
Mutton:					
Chops, loin	do	21.4	23.1	50.3	135.0
Breast, flank	do	18.8	21.0	49.5	163.3
Pork:					
Loin, spareribs	do	20.7	24.4	[1] 30.2	45.9
Ham, fresh	do	18.4	22.7	[1] 30.2	64.1
Shoulder, belly	do	16.4	22.2	[1] 30.2	84.1
Bacon, smoked	do	20.1	30.0	[1] 49.7	147.3
Ham, smoked, sliced	do	38.0	43.6	[1] 64.8	70.5
Butter	do	....	34.6	[1] 57.9	....
Lard	do	17.7	28.3	[1] 54.0	205.1
Potatoes	Bushel	....	76.5	[1] 51.8	....
Eggs	Dozen	....	34.3	57.1	....

[1] Legal maximum price.

GREAT BRITAIN.

On May 1 the average increase in the retail prices of food in Great Britain since the beginning of the war may be put at 55 per cent, according to the Board of Trade Labor Gazette for May. This percentage makes allowance for the relative importance of the various articles in working-class household expenditures and relates to food only. The estimate must not be applied to the total family expenditures therefore, but only to that proportion which is expended on food.

Summarizing the situation as of May 1, 1916, the Labor Gazette notes an increase of about 4 per cent in retail prices since April 1. Both beef and mutton showed an advance of about 6 per cent; but flour and bread continued to decline slightly. Potatoes showed an advance during the month of 42 per cent, and the increase in the tax on sugar is reflected in the rise in the retail price of about 10 per cent.

As compared with May 1, 1915, the general level of prices showed an increase of about 23 per cent.

The table which follows gives the percentage increase in the level of prices on May 1, 1916, as compared with prices prevailing in July, 1914.

PERCENTAGE INCREASE IN PRICE OF FOOD COMMODITIES IN GREAT BRITAIN ON MAY 1, 1916, OVER JULY, 1914.

Article.	Percentage increase from July, 1914, to May 1, 1916.		
	Large towns (population over 50,000).	Small towns and villages.	United Kingdom.
Beef, British:			
Ribs	51	47	49
Thin flank	71	55	63
Beef, chilled or frozen:			
Ribs	70	60	65
Thin flank	91	77	84
Mutton, British:			
Legs	45	44	44
Breast	75	54	64
Mutton, frozen:			
Legs	74	63	69
Breast	112	92	102
Bacon (streaky)	41	33	37
Fish	117	81	99
Flour (households)	55	63	59
Bread	55	48	51
Tea	50	49	49
Sugar (granulated)	158	146	152
Milk	37	30	34
Butter:			
Fresh	34	36	35
Salt	33	34	34
Cheese	50	49	49
Oleomargarine	20	15	17
Eggs (fresh)	23	17	20
Potatoes	62	[1] 32	47
Total [2]	59	51	55

[1] Decrease.

[2] Weighted net percentage increase.

ITALY.

The semimonthly Bollettino of the Italian labor office publishes at the beginning of each month a short table of retail prices of seven articles of ordinary consumption, showing average prices in several cities (40 to 43), as furnished by cooperative stores, local labor unions, and chambers of commerce. Relative prices of these same commodities are also shown in parallel columns, the base from which changes are reckoned being the average prices for the year 1912.

The following table shows the actual and relative prices of the seven commodities for each of the months of December, 1914 and 1915, and January and February, 1915 and 1916:

ACTUAL AND RELATIVE PRICES OF ARTICLES OF FOOD BASED ON AVERAGE PRICES IN 43 CITIES IN ITALY.

Average actual prices.

Article.	Unit.	December.		January.		February.	
		1914	1915	1915	1916	1915	1916
		Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Bread, wheat	Pound	3.9	4.4	4.1	4.5	4.3	4.5
Flour, wheat	do	4.0	4.9	4.3	5.0	4.5	5.0
Macaroni, spaghetti, etc	do	5.1	6.4	5.3	6.5	5.5	6.4
Beef	do	13.2	20.7	13.6	20.4	14.1	20.6
Bacon	do	18.7	24.2	18.8	24.2	18.7	24.0
Oil, table	Quart	34.2	40.0	32.9	41.1	34.2	42.0
Milk	do	6.4	6.9	6.2	6.9	5.9	6.8

ACTUAL AND RELATIVE PRICES OF ARTICLES OF FOOD BASED ON AVERAGE PRICES IN 43 CITIES IN ITALY—Concluded.

Relative prices. Average prices for 1912=100.

Article.	Unit.	December.		January.		February.	
		1914	1915	1915	1916	1915	1916
Bread, wheat	Pound	106.4	118.3	110.7	120.7	110.5	121.2
Flour, wheat	...do	104.3	126.2	111.0	130.1	116.2	128.5
Macaroni, spaghetti, etc	...do	104.3	131.8	109.7	133.8	114.0	132.6
Beef	...do	87.8	137.7	90.1	135.5	93.6	136.6
Bacon	...do	102.8	132.6	103.3	133.2	102.8	131.7
Oil, table	Quart	93.5	109.5	90.0	112.5	93.5	115.0
Milk	...do	102.9	109.8	99.0	110.1	94.7	109.5

NETHERLANDS.

The following table is published by the Journal (*Maandschrift*) of the Dutch statistical office for April 29, 1916, and presents the yearly relative prices for 1913, 1914, and 1915, based on the average monthly price for 29 articles of daily consumption, and the relative prices for the months of December, 1915, and January to March, 1916. The basic prices are those reported by two cooperative associations—one with branches at Amsterdam, Haarlem, Arnhem, Utrecht, and Leeuwarden, and the other at The Hague. The average prices reported for 1893 are taken as a base for calculating the relative prices.

RELATIVE RETAIL PRICES IN THE NETHERLANDS, 1913, 1914, 1915, AND JANUARY TO MARCH, 1916.

[Average prices, 1893=100.]

Commodity.	1913	1914	1915	January, 1916.	February, 1916.	March, 1916.
Beans, brown	154	157	175	196	204	211
Beans, white	166	176	200	210	210	221
Peas, marrow	150	161	178	175	175	175
Peas, yellow	125	139	157	157	157	157
Peas, green	157	143	160	207	213	213
Barley, pearl	113	116	142	152	152	152
Buckwheat, groats	104	117	171	187	192	192
Oatmeal	103	103	137	140	140	140
Cheese, Leyden	140	139	160	161	164	164
Cheese, full cream	124	125	137	127	124	128
Coffee	94	88	91	96	97	99
Oleomargarine	127	99	102	102	106	110
Flour, rye	85	81	115	119	119	122
Flour, wheat	124	129	159	153	153	153
Flour, buckwheat	105	110	152	176	176	176
Butter	94	97	130	144	144	144
Butter, cooking	135	142	207	226	223	228
Oil, rape	136	137	192	186	199	208
Rice	116	116	128	125	125	131
Soda	83	83	117	233	233	250
Starch	103	107	130	137	137	143
Sirup	100	100	125	132	146	146
Sugar, moist	89	91	105	115	115	115
Sugar, granulated	85	89	98	100	100	100
Tea	112	113	116	120	120	120
Vermicelli	121	128	203	207	207	207
Soap, white, Bristol	100	100	119	126	123	123
Soap, green, soft	87	87	121	129	142	150
Salt	80	80	90	90	90	90
Average, all commodities	114	116	142	153	150	158

NORWAY.

Official reports from the Norwegian Labor Office show that, compared with the general retail price level prevailing in 1911, there has been a general increase of 59 per cent in prices for January, 1916, and of 63 per cent for February, 1916. These increases are based on the relative prices of 27 articles, the average annual monthly prices of which are collected for the Kingdom as a whole from 12 or more industrial centers. Individual commodities show even higher increases. Thus, on the average price of 1911 the price of coke had more than doubled, the index number for January, 1916, being 236 and for February, 247. In January, 1916, the price of rye flour was exactly double the price of 1911 and a trifle more than double in February, 1916.

A special investigation of the increase in the cost of living in Christiania showed an increase of 56 per cent in January, 1916, over the general prevailing level of 1901. This is the increase which the average workman's family, consisting of 4.23 persons, with an average income of 1551.10 crowns ($308.49) has suffered in its living expenses, including food, fuel and lighting, clothing, house rent, taxes, and miscellaneous items. The percentage of increase in the different items for indicated periods is as follows:

PERCENTAGE INCREASE IN DIFFERENT ITEMS OF EXPENSE OF AVERAGE WORKINGMAN'S FAMILY IN CHRISTIANIA, NORWAY, FOR INDICATED PERIODS.

Items.	Percentage increase—				
	1901 to first half 1914.	First half 1914 to first half 1915.	First half 1915 to January, 1916.	First half 1914 to January, 1916.	1901 to January, 1916.
Foods	15.7	23.6	14.7	41.8	64.0
Fuel and lighting	8.5	28.0	29.9	66.3	80.4
Clothing	40.0	6.7	30.2	39.0	94.5
Rent	20.4	3.2	3.1	6.4	28.1
Taxes	[1] 43.2	.5	....	.5	[1] 42.9
Miscellaneous	16.8	16.2	15.1	33.7	56.2
Total	16.8	16.2	15.1	33.7	56.2

[1] Decrease.

SWEDEN.

Average monthly retail prices of 56 articles are available for Sweden from 44 different industrial centers. During February, 1916, 31 articles increased in price, among which are included potatoes, meats of different varieties, coffee, sugar, and petroleum; 11 have declined, including butter, eggs, rye flour, and salt pork; and 14 articles have remained unchanged, including milk, flour, mixed rye, and different varieties of rye bread.

Prices of 28 commodities, as reported for February, 1914, 1915, and 1916, together with the per cent of increase or decrease over each preceding period, is shown in the table which follows:

AVERAGE PRICES OF 28 COMMODITIES DURING FEBRUARY, 1914, 1915, AND 1916, AND INCREASE OR DECREASE PER CENT, 1914-1916; 1915-1916.

[Source: Sociala Meddelanden utgivna av K. Socialstyrelsen, Stockholm, 1916, No. 3.]

Article.	Unit.	Average price during February—			Increase (+) or decrease (−) in per cent.	
		1914	1915	1916	February, 1916, over February, 1914.	February, 1916, over February, 1915.
Milk, unskimmed	Quart	$0.036	$0.038	$0.046	+ 28.6	+20.0
Butter, table, best	Pound	.284	.321	.367	+ 29.1	+14.4
Butter, cooking, country	...do	.255	.289	.326	+ 27.6	+12.6
Oleomargarine, vegetable	...do	.168	.202	.229	+ 36.2	+13.3
Eggs, fresh	Dozen	.281	.363	.357	+ 26.9	− 1.4
Peas, yellow	Pound	.038	.071	.068	+ 80.6	− 3.8
Beans, brown	...do	.056	.079	.125	+123.9	+58.5
Flour, wheat, Swedish, best	...do	.038	.047	.046	+ 22.6	− 2.6
Meal, rye, Swedish, best	...do	.026	.038	.036	+ 42.9	− 3.2
Oatmeal, steamed	...do	.044	.067	.060	+ 36.1	−10.9
Rice, Swedish, best	...do	.049	.055	.057	+ 17.5	+ 4.4
Rye bread, hard	...do	.050	.062	.063	+ 26.8	+ 2.0
Rye bread, soft, loaf, sweet	...do	.046	.055	.058	+ 26.3	+ 6.7
Rye bread, loaf, sour	...do	.036	.043	.046	+ 26.7	+ 8.6
Wheat bread, loaf, with water, cheapest	...do	.053	.061	.064	+ 20.5	+ 6.0
Wheat bread, loaf, with milk, cheapest	...do	.073	.079	.079	+ 8.3	+ 3.2
Beef, fresh:						
Roasting	...do	.146	.143	.184	+ 25.8	+28.0
Soup	...do	.120	.122	.158	+ 31.3	+30.0
Veal, roasting:						
Fattened	...do	.159	.165	.205	+ 29.0	+24.3
Young	...do	.089	.090	.122	+ 37.0	+35.1
Mutton:						
Fresh, steak	...do	.162	.168	.218	+ 34.6	+29.7
Salt, Swedish	...do	.143	.151	.192	+ 33.9	+27.4
Pork:						
Fresh, sides	...do	.159	.177	.269	+ 68.7	+51.4
Salt, Swedish	...do	.168	.187	.276	+ 64.5	+47.4
Herring, salt, fat	...do	.056	.055	.097	+ 73.9	+77.8
Coffee, green, prime, Santos	...do	.194	.196	.207	+ 6.3	+ 5.6
Sugar, loaf	...do	.078	.080	.083	+ 6.3	+ 3.0
Kerosene, water-white	Gallon	.203	.223	.254	+ 25.0	+13.6

For the city of Stockholm there is available a series of relative retail prices for the years 1904–1915, prepared by the Swedish Labor Office and published in its monthly periodical since 1912.[1] These prices are based on average annual retail prices in Stockholm as derived from monthly quotations of 56 articles. The index is weighted according to the quantity of consumption of the different commodities as shown for an average family consisting of 4.4 persons. These quantities were derived as the result of a special investigation of 150 household budgets kept by families of moderate means (average income of 2,200 crowns, or $589.60) during the winter of 1907–8. By multiplying the average prices in any year in question by the average quantity of each article consumed during the year by the average family, and combining the result, there is obtained a statment which shows the annual cost of living for an average family during any particular year.

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[1] Sociala Meddelanden utgivna af K. Socialstyrelsen. Stockholm, 1912, p. 35; 1913, p. 260; 1914, p. 129; 1915, p. 132; 1916, p. 193.

The results thus obtained and stated in terms of crowns were then reduced to relative prices, the amount for the year 1904 being taken as the base, or 100. The result in percentages is as follows:

COST PER YEAR (ACTUAL AND RELATIVE) OF A FAMILY BUDGET OF STAPLE FOODS, FUEL, AND LIGHTING, IN TERMS OF THE AVERAGE MONTHLY PRICES IN STOCKHOLM, 1904-1915.

Year.	Cost.	Index number.	Year.	Cost.	Index number.
1904	670 crowns ($179.56).	100.0	1910	760 crowns ($203.68).	113.4
1905	696 crowns ($186.53).	103.9	1911	757 crowns ($202.88).	113.0
1906	712 crowns ($190.82).	106.3	1912	806 crowns ($216.01).	120.3
1907	738 crowns ($197.78).	110.1	1913	808 crowns ($216.54).	120.6
1908	758 crowns ($203.14).	113.1	1914	828 crowns ($221.90).	123.6
1909	760 crowns ($203.68).	113.4	1915	999 crowns ($267.73).	149.1

SWITZERLAND (ZURICH).

Under date of March 2, 1916, the American consul general at Zurich, Switzerland, reports that of 29 articles of ordinary household consumption 26 showed increase in price of from 3 to 175 per cent on March 1, 1916, as compared with June 1, 1914. Honey alone has decreased in price, while ordinary table chocolate and tea have remained unchanged. Meats, milk, and clothing have also increased in price.

The prices are those published by the Provision Association (*Lebensmittel-Verein*) of that city.

The consul comments that "the table strikingly illustrates the change in the household problem, since before the war, in the chief city of this neutral oasis." These increases in the cost of living, it is stated, are general in all Switzerland. The table follows.

PRICES OF COMMODITIES OF HOUSEHOLD CONSUMPTION IN ZURICH, SWITZERLAND, JUNE 1, 1914, AND MARCH 1, 1916.

Commodity.	Unit.	Price June 1, 1914.	Price Mar. 1, 1916.	Increase, per cent.
		Cents.	*Cents.*	
Cheese, full cream	Pound	21.0	24.5	18.5
Coffee	do	17.5	21.0	20
Oil, sesame	Quart	27.4	32.9	20
Butter, table	Pound	33.3	40.3	21
Butter, cocoa	do	14.9	21.0	41
Flour	do	4.0	5.8	43
Butter, cooking	do	26.3	38.5	47
Petroleum	Gallon	18.3	27.0	48
Bread	Pound	3.0	4.6	53
Lard, American	do	15.8	24.5	56
Eggs	Dozen	23.2	34.7	58
Potatoes	Bushel[1]	57.8	94.5	64
Alcohol, fuel	Gallon	47.5	80.3	69
Soap, best grade	Pound	8.8	14.8	69
Lentils	do	4.4	7.5	72
Corn meal	do	2.5	4.8	79
Rice, Italian	do	4.4	7.9	80
Groats	do	3.7	6.7	81
Rice, Indian	do	3.9	7.5	95
Sugar, broken loaf	do	3.9	7.9	105
Beans	do	3.9	9.1	136
Oatmeal	do	3.7	8.8	138
Oats, hulled	do	3.9	9.3	141
Barley	do	3.5	9.6	175
Coal, briquets	220.4 pounds	39.0	40.3	3
Chocolate, cooking	Pound	26.3	26.3	
Tea	do	70.0	70.0	
Honey	do	35.0	33.3	[2] 5

[1] 60 pounds.

[2] Decrease.

EMPLOYMENT IN FOREIGN COUNTRIES.

FRANCE.

The French Labor Office through its factory inspectors has made several inquiries concerning the amount of employment prevailing at different times during the period of the war. The most recent inquiry related to conditions on January 1, 1916. Previous investigations were made on August 1, 1914, October 1, 1914, and the 1st of January, April, July, and October, 1915, respectively. The method consists in comparing the number employed in identical establishments in any particular month with the normal number employed prior to the war.

The establishments covered by the investigations numbered 49,501, employing 1,690,453 workmen. The January inquiry showed that of this normal number of establishments 40,091 or 81 per cent were active. These establishments employed only 77 per cent of the normal number of workmen employed in them prior to the war.

This might lead to the erroneous conclusion that 23 per cent of the workers were unemployed on January 1, 1916. It must, however, be considered that the number of men mobilized since the outbreak of the war is about 24 per cent of the total number of workers of both sexes employed under normal conditions, so that on January 1, 1916, the number of workers employed was actually 1 per cent greater than under normal conditions.

The inquiry concerning the number of women employed in French munition industries showed 109,300 engaged in that work. In private establishments women formed 11.2 per cent of the total employed.

The following tables present data showing the number of establishments and the number of persons employed at the time of the different inquiries made by the French Labor Office since the outbreak of the war.

NUMBER OF PERSONS EMPLOYED IN IDENTICAL ESTABLISHMENTS UNDER NORMAL CONDITIONS, AND NUMBER AND PER CENT EMPLOYED ON AUG. 1, 1914, JAN. 1, AND JULY 1, 1915, AND JAN. 1, 1916, BY INDUSTRIES.

Industries.	Number of persons employed under normal conditions.	Number of persons employed on—				Per cent of normal number employed on—			
		Aug. 1, 1914.	Jan. 1, 1915.	July 1, 1915.	Jan. 1, 1916.	Aug. 1, 1914.	Jan. 1, 1915.	July 1, 1915.	Jan. 1, 1916.
Food products	102,585	43,556	68,509	73,755	82,808	42	67	72	81
Chemical industries	85,706	35,279	57,142	65,941	74,350	41	67	77	87
Rubber, paper, and cardboard	60,567	20,686	31,579	37,830	42,791	34	52	62	71
Printing and bookbinding	43,359	13,967	17,703	19,949	20,172	32	41	46	47
Textile industries	381,126	124,985	232,577	268,794	280,519	33	61	71	74
Clothing, millinery, etc	147,353	44,027	79,311	98,826	102,127	30	54	67	69
Hides and leather	59,102	22,620	38,494	45,272	47,687	38	65	77	81
Woodworking	91,712	18,362	34,977	41,558	46,843	20	38	45	51
Metal industries, base	431,862	141,542	261,697	347,181	447,114	33	61	80	104
Fine metals	10,234	966	2,049	3,233	3,772	9	20	32	37
Precious stones	2,516	427	816	1,105	1,239	17	32	44	49
Building trades	65,717	14,674	16,654	21,906	24,404	22	25	33	37
Stoneware, earthenware, and glassware	69,038	13,024	22,091	26,854	30,009	19	32	39	43
Transportation, loading, and unloading	30,206	14,517	19,390	25,071	25,450	48	64	83	84
Miscellaneous commercial establishments	109,370	57,348	61,878	67,606	70,592	52	57	62	65
All industries	1,690,453	565,980	944,867	1,144,881	1,299,877	34	56	68	77

As indicating the activity in coal mining, the Central Association of Coal Mine Owners in France reported concerning 47,959 men employed in December, 1915, that 90.6 per cent worked full time, i. e., six days or over, per week; and in January, 1916, out of a total of 44,038 employed, that 94.5 per cent worked full time per week. It is noted that in normal times this association has a pay roll of approximately 190,000 men.

GERMANY.

The Reichs-Arbeitsblatt for March, 1916, reports as follows on the condition of the labor market in February:

> The industrial situation, with the exception of textiles and clothing, shows very considerable improvement in comparison with a year ago. Although in times of peace the labor market in a number of industries normally shows an improvement in February over the preceding month, this improvement has not been so pronounced during the war, because the so-called war industries dominate the labor market. The principal war industries have for some months past been employed at their highest intensity, and even after 19 months of war continued as active as ever during February.

The demand for coal, in normal times less in February than in January, continued at a high level and gave more employment than in February, 1915. Employment in the metal, mechanical, and electrical industries continued as good as in the preceding month, but somewhat improved over the corresponding month of 1915. Slight improvement over conditions in January was noted in the chemical and the woodworking industries. No revival as yet had taken place in the building trades.

Returns from the sick funds showed a continuous decline in the numbers employed among the male members, a decline which was partly offset by an increased employment of women members.

Reports from 815,196 members of 37 trade-unions showed 22,987, or 2.8 per cent unemployed during the month. The percentage unemployed for January was 2.6. In February, 1915, the percentage was 5.1, and in February, 1914, 3.7.

According to returns from the public employment offices there were, among males, 86 applicants for each 100 vacancies reported, as compared with 84 in January, 1916, and 113 in February, 1915. For women applicants the ratio in February, 1916, was 167, in January 163, and in February, 1915, 172.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1915, AND FEBRUARY, 1916.

Industry.	Establishments reporting.	Number on pay roll at the end of February—		Per cent of increase (+) or decrease (−).
		1915	1916	
Mining and smelting	36	52,461	61,246	+16.75
Iron and steel, and metal	61	81,454	97,377	+19.55
Machinery	80	61,722	70,609	+14.40
Electrical	11	5,161	5,096	− 1.26
Chemical	31	26,853	30,688	+14.28
Textile	27	12,358	8,502	−31.20
Woodworking	12	2,748	2,261	−17.72
Food products	12	8,423	8,527	+ 1.23
Clothing	13	4,017	4,566	+13.67
Glass and china	11	3,463	3,247	− 6.24
Paper and printing	20	4,965	4,974	+ 0.18
Other industries (inclusive of building materials and navigation)	16	3,549	3,218	− 9.33
Total	320	267,174	300,311	+12.40

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY AND FEBRUARY, 1916.

Industry.	Establishments reporting.	Number on pay roll at the end of—		Per cent of increase (+) or decrease (−).
		January, 1916.	February, 1916.	
Mining and smelting	31	40,163	40,523	+0.90
Iron and steel, and metal	54	99,518	101,306	+1.80
Machinery	72	59,432	61,990	+4.30
Electrical	3	1,136	1,074	−5.46
Chemical	30	29,955	30,610	+2.19
Textile	14	7,378	7,138	−3.25
Woodworking	7	1,356	1,409	+3.91
Food products	11	8,541	8,473	−0.80
Clothing	10	3,947	4,084	+3.47
Glass and china	9	2,228	2,255	+1.21
Paper and printing	17	3,993	4,160	+4.18
Other industries (inclusive of building materials and navigation)	13	2,864	2,968	+3.63
Total	271	260,511	265,990	+2.10

GREAT BRITAIN.

The Board of Trade Labor Gazette for May reports good employment in the principal industries during April, some working at great pressure. "The increasing number of enlistments emphasizes the need for more women and girls, and the substitution of them for men must be carried much further than hitherto if the requirements of industry are to be met."

Compared with the volume of employment in April, 1915, there was a decline in the number of employees, but an increase in the amount of wages paid.

Employment conditions were generally good in the mining industries. The pig-iron industry was short of labor and raw materials, but employment was good. The mechanical industry, shipbuilding, and metal trades were generally working at pressure with considerable overtime. The activity was not so pronounced in the textile trade, although conditions were reported as fairly good. On the other hand, the boot and shoe trade continued at high pressure.

The trade-union percentages of unemployed was negligible, 940,698 members reported 0.5 per cent unemployed at the end of April, 1916, as compared with 1.2 per cent at the end of April, 1915.

The percentage of employees insured under the unemployment insurance act was 0.7 at the end of April, compared with 1.1 per cent during the same month a year ago.

Returns from establishments employing 603,778 employees in different industries for the week ended April 15, 1916, showed a decrease of 0.6 per cent in the number employed, and an increase of 0.4 per cent in the amount of wages paid compared with the month preceding; but compared with a year ago there was a decrease of 3.1 per cent in the number employed, and an increase of 5.1 per cent in the amount of wages paid. A table giving more detail follows:

Trade.	Number employed.			Wages paid.		
	Week ended Apr. 15, 1916.	Per cent of increase (+) or decrease (−).		Week ended Apr. 15, 1916.	Per cent of increase (+) or decrease (−).	
		Month ago.	Year ago.		Month ago.	Year ago.
Textiles:						
Cotton	180,038	−0.9	− 5.1	$982,016	(1)	+ 2.1
Woolen	23,582	− .4	+ .1	134,773	+0.6	+ 6.4
Worsted	33,867	− .2	− 2.9	162,921	− .1	+ 6.4
Linen	39,924	− .1	− 3.3	139,883	+2.7	+11.5
Jute	12,166	+ .6	+ 6.6	61,727	+2.0	+12.5
Hosiery	22,037	+ .4	+ 5.0	104,109	+ .8	+18.7
Lace	8,767	− .1	+ 2.0	47,190	−1.5	+12.7
Other textiles	16,601	− .1	− 4.3	74,832	+ .8	+ 6.4
Bleaching, dyeing, etc	25,753	+ .6	+ 7.4	201,468	+1.4	+21.8
Total	362,735	− .4	− 2.4	1,908,919	+ .5	+ 6.8
Boot and shoe	64,783	− .2	− 3.8	395,106	+ .8	+ 2.4
Shirt and collar	19,504	+ .2	− 2.8	73,139	− .5	+ .3
Clothing (ready-made)	32,409	−2.0	− 7.5	147,927	−1.5	− 7.4
Printing and bookbinding	23,051	− .4	− 8.1	147,192	− .7	+ .8
Pottery	18,086	− .3	(2)	98,839	−1.0	+12.7
Glass	10,437	−1.3	− 3.9	82,550	− .9	+10.2
Brick	6,453	(1)	−22.7	45,823	+6.3	−14.6
Cement	7,195	−1.1	−13.6	62,496	+3.8	− 9.9
Food preparation	59,125	−1.9	+ 1.5	315,106	+ .7	+11.9
Grand total	603,778	− .6	− 3.1	3,277,096	+ .4	+ 5.1

[1] Decrease less than one-tenth of 1 per cent.

[2] Increase less than one-tenth of 1 per cent.

The changes in rates of wages reported as taking effect in April were all increases and affected nearly 300,000 workpeople. These increases resulted in the total addition of over £30,000 ($145,995) to the weekly wages of those concerned. Among those affected by this increase were 114,000 coal miners in Scotland and 44,500 in Northumberland; 30,000 machinists in the Manchester district; 20,000 puddlers and millmen in the Midlands; 20,000 carters in London, and about 17,500 employees in the building and allied trades.

SCANDINAVIAN COUNTRIES.

Reports from the statistical office of Denmark show that 10.5 per cent of her 138,200 organized workmen were without work during January, 1916. The corresponding percentage in 1915 was 17.5 and in 1914, 18.5. The number of days lost per workman during January, 1916, was two and one-half. The largest amount of unemployment prevailed in the towns outside of Copenhagen. According to industry groups the largest percentage of unemployment, or 25.8, prevailed in the building and furniture industries. Among ordinary workmen the percentage of unemployment was 16.8, and among workmen employed in factories the percentage was the lowest, or 3.3 per cent.

Reports from the labor office of Norway are to the effect that unemployment was below the normal in February, 1916. The average percentage of the 13 trade-unions reporting conditions at the close of February in that respect showed 1.8 per cent unemployment as compared with 2.1 per cent at the end of January preceding, and 4 per cent at the close of February a year ago. It is particularly noted that in the woodworking industries the percentage of unemployment declined from 13.9 in February, 1915, to 3.1 in February, 1916, and also of bakers from 13.8 to 4.8. In January the percentage of unemployment for woodworkers was 6.4 and for bakers 7.

Reports from 26 public employment offices show a decline in the number of applications for work of from 5,769 in January, 1916, to 5,148 in February; but the number of vacancies reported in January was 4,289 compared with 4,295 in February. Compared with February a year ago there was a considerable increase in the number of applicants for work and also in the number of vacancies reported; the number of applicants for each 100 vacancies reported fell from 145 in February, 1915, to 120 in February, 1916.

During January and February there was a slight increase in the number employed in the establishments of the National Association of the Engineering and Machine Tool Trades. The number increased from 18,253 on January 1, 1916, to 18,329 on February 1, and to 18,424 at the close of February.

The Swedish Labor Office notes that the labor market during February, 1916, has generally improved, and considering the season of the year, is quite satisfactory. Strikes have occurred, however, in the building industry in Skåne, and also in lumbering in Norrland.

Considering the season, the number of applicants at the public employment offices in February, 1916, was less in proportion to 100 places available than for any of the years 1913 to 1915, or the average for the period 1902 to 1912. The number of applicants for 100 places vacant was as follows: February, 124; January, 138; December, 1915, 113.

Among trade-union membership the percentage unemployed in February, 1916, was 8.2 as compared with 14.8 in 1915; 10.4 in 1914; 8.9 in 1913; and 11.1 in 1912. In December, 1915, the percentage unemployed was 4.5. The percentage of unemployment in December was based on reports concerning 66,947 organized workmen. As complete data are available at present only for the month of December, 1915, it is noted that during that month the largest percentage of unemployment, or 46.4, was found among plasterers; the next highest percentage, or 27.9, among masons, followed in order by painters, 20.1 per cent; street pavers and waterworks employees, 19.3; quarry workers, 15.1; and hatters, 14.4 per cent. These high percentages are largely explained by the season of the year.

TUBERCULOSIS AMONG INDUSTRIAL WORKERS.

A recent study by surgeons of the Public Health Service of tuberculosis among industrial workers in Cincinnati, Ohio,[1] estimates that a considerable percentage, probably 19.3 per cent, of tuberculosis is due to occupation hazards and to working conditions, hazards and conditions not necessarily inherent in the occupation, but due to harmful factory influences which existing legislation is adequate to remove; that the elements of poverty and poor housing intensify the effect of family infection and hereditary predisposition, which are admittedly predisposing factors most in evidence; that there is abundant evidence that the course of tuberculosis is much accelerated on account of alcoholism, although the connection between alcoholism and the disease was apparent in only 7.2 per cent of the cases. Generally speaking, the report states, in a large proportion of cases of tuberculosis (23.3 per cent) it was impossible to assign the chief place to any predisposing cause.

The investigation, the findings of which are thus summarized, is the result of a survey undertaken by the Public Health Service at the request of the board of health and of the Anti-Tuberculosis League of Cincinnati in order to determine to what extent the high death rate from tuberculosis in that city was due to the influence of occupation. The work was begun in March, 1914, and was completed a little over a year later, in April, 1915. As the work developed, consideration was given to any other condition besides occupation which might be a possible factor in producing the high death rate.

Recognizing the fact that either an unusually low or high death rate in any State may be more apparent than real, that wide differences in the death rate as between cities may be due to differences in methods of reporting, that diagnosis may frequently be faulty, and that the death rate from tuberculosis is materially affected by the prevalence of pneumonia, the report is nevertheless of the opinion that an especially high tuberculosis death rate can not be wholly thus explained, and does not justify a neglect to study carefully every condition which may be reasonably supposed to influence the general situation. And this is particularly true where the death rate from tuberculosis has been higher, as is the case in Cincinnati, than that of the country at large.

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[1] United States Public Health Service. Tuberculosis among industrial workers, report of an investigation made in Cincinnati, with special reference to predisposing causes, by Surg. D. E. Robinson and Asst. Surg. J G. Wilson. Washington, 1916. 143 pp. (Public Health Bull. No. 73, Mar., 1916.).

In order to segregate the different factors influencing the tuberculosis death rate, an inquiry was made into the surrounding living conditions of each person examined, as far as possible, the persons in the different establishments having been previously made interested in the whole question by lectures setting forth the purpose and importance of such an investigation. The physical examinations were made in some place in each establishment set aside by the employer. This examination, made by the physicians personally, consisted in taking the temperature of each subject, as thorough an examination of the chest as possible, and questioning the worker relative to family history and as to cough, loss of weight, "stomach trouble," and other symptoms commonly associated with tuberculosis. In most cases it was not possible to examine the chest entirely bared; it was therefore necessary to be content with inspection, percussion, and auscultation of the upper portion of the chest posteriorly to the spine of the scapula, and anteriorly and laterally to the lower border of the lung. In females the examination anteriorly did not extend below the level of the fourth rib.

Conservatism in diagnosis, it is stated, was the rule, and no doubtful case was diagnosed as tuberculosis unless two of the examining physicians concurred. Where it was not possible to arrive at a definite diagnosis from one examination, a special examination was held, whenever the employee observed his promise and appeared for such supplementary diagnosis. In this connection it should be noted, furthermore, that, as the report states, in many places there were a few who could not be persuaded to have any examination made, "and too often these were the ones whose physical appearance would lead one to suspect the presence of the disease."

The inquiry in question was conducted in 154 establishments and covered 19,932 employees. Out of the 38 industries included, tuberculosis was found among employees in 29. Among the number examined, 220 cases of tuberculosis, or 1.1 per cent, were found. The number of males examined was 14,049 with a tuberculosis percentage of 1.07, and 5,883 females with a tuberculosis percentage of 1.19. The percentage of employees between 15 and 35 years of age was 66, and the percentage over 35 years, 34. Of those examined 22.3 per cent had been in the particular industry in question less than one year; 31.5 per cent from 1 to 3 years; and 46.6 per cent over 3 years.

It must not be assumed, the report states, that a hazardous occupation was the active predisposing cause simply because a person engaged in such occupation was found to have tuberculosis. Giving consideration to other factors it was found that in the 220 cases of tuberculosis there were 62 (34.3 per cent) in which there was a history of tuberculosis in the family; 19 (10.5 per cent) in which poverty and poor housing appeared most in evidence; 13 (7.2 per cent) in which alcoholism, venereal diseases, and excesses appeared; 10 (5.5 per cent) in which other diseases and injuries were noted; and 35 cases (19.3 per cent) in which occupational hazards or working conditions were most in evidence. There were 42 cases (23.2 per cent) in which none of the foregoing factors were in special evidence, while in 39 cases no data were obtainable. These 39 cases were eliminated in the calculation and consideration was given only to the 181 cases for which complete data were obtained.

The second part of the study relates to the predisposing causes of tuberculosis in cases reported to the Board of Health of Cincinnati. In the 138 cases investigated the report states it is reasonable to conclude from all the evidence that the following were the chief factors predisposing to tuberculosis: (1) Insufficient income resulting in poor or insufficient food, heat, clothing, and recreation; (2) family infection and family predisposition; (3) occupation hazard; and (4) alcohol, "which seemed to act as a link in a vicious circle, aggravating all other deleterious influences and exerting itself most strongly when combined with one or more of the foregoing."

The third part of the report relates to the predisposing causes of tuberculosis among 204 inmates of the Municipal Tuberculosis Hospital. The cases studied showed that occupation in itself had been a relatively unimportant factor.

The remainder of the investigation was concerned with the larger phases of the problem of the causes of tuberculosis as affecting the city of Cincinnati, and included a survey of predisposing causes as determined by general housing and economic conditions in the city; causes associated with climatic conditions, including the prevalence of Ohio River floods; prevalence of other diseases as a predisposing cause of tuberculosis; causes inherent in the character and growth of the population; measures in operation for the eradication of tuberculosis; and cost to the people of Cincinnati of care and treatment of tuberculous cases. The report contains illustrations, maps, and charts upon various features of the inquiry.

Among other suggestions of a general nature concerning health inspection and the reporting of cases, the investigators recommend the institution of State industrial insurance by which the worker can obtain the necessary medical relief, and pecuniary aid for the family while the remedial measures are being carried out; the improvement of home conditions by providing sanitary homes in the suburbs at reasonable rent, and cheap and rapid transit between these homes and places of work.

LIGHTING FOR FACTORIES, MILLS, AND OTHER WORK PLACES.[1]

The Illuminating Engineering Society, organized in 1906 to advance the theory and practice of illuminating engineering and to disseminate knowledge relating thereto, is made up of about 1,500 members who are interested in the subject of lighting from various standpoints—engineering, economic, hygienic, and esthetic. Committees of this society have prepared a code of lighting for factories, mills, and other work places "in order to make available authoritative information for legislative bodies, factory boards, public service commissions, and others who are interested in enactments, rules, and regulations for better lighting. While the code is intended as an aid to industrial commissions and other similar bodies in those States and municipalities which shall actively take up the questions of legislation as related to factory and mill lighting, it is intended in equal measure for the industries themselves as a practical working guide in individual efforts to improve lighting conditions."

The following 11 articles, supplemented by 8 explanatory rules, constitute the code of lighting as approved by the Illuminating Engineering Society:

ARTICLE I. All buildings hereafter constructed must be provided with adequate window area. * * * The daylight openings shall be so designed and proportioned that at the darkest part of any work space, when normal exterior daylight conditions obtain, there shall be available at least a minimum intensity equal to three times the minimum intensities given in Article V for artificial light.

ART. II. Old buildings at present constructed and not having adequate window area must be provided with adequate artificial light, * * * so as to supplement the natural light during normal daylight hours.

ART. III. All buildings, whether old or hereafter constructed, must be provided during those hours of work when natural light is insufficient or not available, with adequate artificial light * * *.

ART. IV. Adequate intensity of the light must be provided for each class of work, both on a horizontal plane as well as on a vertical plane passing through the work, according to Article V. In all cases, however, glare on working surfaces is to be avoided, as it tends to reduce the visual efficiency of the workmen and to increase the likelihood of accidents.

ART. V. Artificial light—Intensity required: The average illumination intensity throughout any month actually measurable in foot candles on a horizontal plane through the work is to conform to the following table. * * *

Class of work.	Minimum foot-candle intensity.	Desirable foot-candle intensity.
Storage, passageways, stairways, and the like	0.25	0.25– 0.5
Rough manufacturing and other operations	1.25	1.25– 2.5
Fine manufacturing and other operations	3.50	3.50– 6.0
Special cases of fine work		10.00–15.0

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[1] Code of Lighting [for] Factories, Mills, and Other Work Places. New York, 1915. 45 pp. Illustrated.

Where operations are performed on the sides of the work in hand they shall be classified according to this table, and if the illumination is furnished from an overhead system it shall preferably be not less than 50 per cent of the foregoing values, when measured on a vertical surface. If the illumination is furnished by an individual lamp or by lamps close to the work, the intensity shall conform to the minimum or desirable intensities required in the foregoing table.

(NOTE.—As a guide to inspectors and others it may be stated that with modern lamps roughly 1 candlepower per square foot produces an effective illumination of 3 foot candles when the lamps are arranged according to the uniformly distributed overhead system, with mounting heights ranging from 12 to 16 feet above the floor, and when the light is directed from said lamps to the work in an efficient manner. A rough idea may thus be secured of the candlepower per square foot necessary to conform to the foregoing table of intensities by taking one-third of the intensity values given in the foregoing table.)

Thus for fine manufacturing and other operations the minimum foot-candle intensity is 3.5, which is approximately equal to 1.2 candlepower per square foot. The use of a portable photometer or illuminometer, however, is recommended for the determination of existing systems, and all uncertain cases are finally to be established by these instruments.

ART. VI. Lamps and machinery jointly are to be so arranged as to avoid the casting of shadows over belts and other obstructions on important parts of the work, and the distribution of light from the lamps should be such as to avoid sharp contrasts of light and shade on the work.

ART. VII. Inspection and regular maintenance of all lighting systems is required in spaces where work is being conducted, and in no case must the lighting devices, whether windows, lamps, or auxiliaries, such as globes and reflectors, be allowed to deteriorate, due either to dirt accumulations or to burned-out lamps, more than 20 per cent below the minimum intensity values required by Article V.

ART. VIII. Roadways, yards, and places not usually frequented must either be provided by illumination during working hours when natural light is absent or partly absent, to make them safe against accident to employees traversing or engaged in such places, or a convenient control or controls must be placed at the entrance to basements, stock rooms, and the like, so that a person on entering can readily turn on the lamps beforehand.

ART. IX. Stairways and passageways must be provided with lamps and reflectors or shades carefully located so as to shed their light generally over the entire space or spaces involved, and in sufficient quantity to make stairways and passages safe against accident to employees traversing or engaged in such places.

ART. X. Each working space is preferably to be illuminated by lamps mounted overhead according to the system of general lighting, in preference to individual lighting. The overhead method of lighting, besides possessing many other advantages, also tends to reduce dark spots throughout the floor area, a feature usually objectionable with the use of individual lamps. This particular article is not an absolute requirement, but a suggestion enforceable at the discretion of a lighting expert.

ART. XI. Auxiliary lighting should be provided in all large work spaces, such lamps to be in operation simultaneously with the regular lighting system, so as to be available in case the latter should become temporarily deranged.

The rules intended to aid in the observance of the above requirements, to reduce eye trouble and accidents, and to help in the securing of favorable results in planning lighting systems, are as follows:

1. Lamps should be equipped with reflectors or shades for minimizing glare and economizing light. Bare lamps should not be used except in rare cases, and then only when out of the line of vision.

2. As a general plan, mount the lamps high and out of the ordinary line of vision.

3. Although the types of reflectors and shades, and reflector and shade holders or fitters on the market are numerous, it is recommended that the holder or fitter, as well as the reflector or shade be selected with reference to placing the light source at the proper point in the reflector or shade so as to eliminate glare, due to exposure of the light source, and also for the purpose of directing the light from the lamp effectively to the work; that is, for obtaining a distribution of light which meets the desired requirements.

4. Light thrown vertically downward is not the only important component of the resulting illumination. The sides of machinery, machine tools, and work, as well as horizontal surfaces often require good light.

5. Control few lamps in each group so that lamps not needed may be turned off conveniently.

6. Keep windows, lamps, and reflectors clean since large losses of light result from the accumulations of dust and dirt.

7. Provide a maintenance department if the shop is large enough to warrant it, so that all the items associated with the upkeep of the lighting system may be cared for systematically.

8. Keep ceilings and upper portions of walls a light color for the purpose of rendering both natural and artificial lighting more efficient and better diffused. The lower portions of walls should be a color which is restful to the eyes, preferably a medium tint, typified by the tint known as factory green, or a rather dark shade of yellow. Other medium tones are also available.

In 40 pages devoted to explanatory notes, diagrams, and illustrations, these articles and rules are taken up in detail, the purpose being to define the requirements more carefully and particularly and to offer practical suggestions for putting them into effect. Three important considerations of any lighting method are stated to be sufficiency, continuity, and diffusion, and a recognition of these considerations applied to the daylight illumination of interiors, the importance of which is strongly emphasized, has suggested the following requirements for natural lighting:

1. The light should be adequate for each employee.

2. The windows should be so spaced and located that daylight conditions are fairly uniform over the working area.

3. The intensities of daylight should be such that artificial light will be required only during those portions of the day when it would naturally be considered necessary.

4. The windows should provide a quality of daylight which will avoid a glare due to the sun's rays and light from the sky shining directly into the eye, or where this does not prove to be the case at all parts of the day, window shades or other means should be available to make this end possible.

5. Ceilings and upper portions of walls should be maintained a light color to increase the effectiveness of the lighting facilities from window areas. The lower portions of walls should be somewhat darker in tone to render the lighting restful for the eye. Factory green or other medium colors may be used to good effect.

The means for natural lighting are classified under three heads, as follows:

1. That case in which the windows are located on the sides of the building or in the framework of saw-tooth construction, where diffused light from the sky reaches the work during a large portion of the day.

2. That case in which windows are located overhead on a horizontal or nearly horizontal plane in the form of skylights, thus furnishing direct light from the sky during a large portion of the day.

3. That case in which prismatic glass takes up the direct light from the sky and redirects it into the working space.

The report emphasizes the necessity of designing the factory so as to produce the best practicable distribution of daylight illumination. This would include avoiding wide aisles and low ceilings, placing the windows as near the ceiling as practicable in rooms of moderate size, tempering the light by employing an opaque shade to be raised from the bottom of the window, arranging the work benches so that the light received on the work may be most satisfactory, using translucent or wire glass windows, prism glass or skylights, keeping all glass free from accumulations of dirt, and avoiding sunlight. A method for calculating the intensity of natural light is given as follows:

> In certain typical localities, the average brightness of the sky during business hours is about 250 candles per square foot. This is probably a fair average value for the entire United States. The lower or minimum value of sky brightness, excluding particularly stormy days, may be taken as about 100 candles per square foot. Allowing for a reduction of 25 per cent for losses in the windows themselves, the brightness of the sky as seen through a window becomes equal to a minimum of say 75 candles per square foot in any direction from which the sky can be seen through the windows. This brightness value if multiplied by the part of the window area through which sky is visible from a given point in the work space gives the available candlepower through the window in question, and this candlepower is then divided by the square of the distance between the given point and the window to obtain the foot-candle intensity of the illumination at the given point.
>
> To illustrate this method, consider a hallway 40 feet long, lighted by a window 5 feet by 5 feet at one end, with the sky visible from the darker end of the hall through the upper half of the window only. The illumination at the dark end of the hall will then be equal to
>
> $$5\times5\times0.5\times\frac{75}{1,600}=0.58 \text{ foot candles}$$
>
> under the assumed window brightness of 75 candles per square foot. The 1,600 in this calculation results from the square of 40 feet, the length of the hall, or in other words the distance from the point considered to the window; and the factor 0.5 takes into account the fact that the sky is visible through only one-half of the window area from the point considered.
>
> The intensity is not sufficient at this darkest part of the hall since the requirements of Article I of the code proper call for three times the minimum values given in Article V, and the minimum value given in Article V for passageways is 0.25. Three times this value is 0.75 which is somewhat greater than the value found in this calculation. The window area must therefore be increased in size by about 50 per cent, or if this is impossible or impracticable, the hallway must be provided with artificial light at those points where the natural light falls below the requirement.
>
> As another illustration, assume that fine manufacturing work is to be performed under a skylight 20 feet above the work. If the brightness is assumed to be 75 candles per square foot as before, the minimum intensity must be 3 by 3.5 foot candles, that is, 10.5 foot candles, based on the requirements of Article I of the code. The window area must then equal:
>
> $$10.5\times\frac{400}{75}=56 \text{ square feet.}$$

It is important in estimating the illumination of any workroom to consider only that portion of the window area through which clear sky is visible, provided the window is equipped with ordinary clear glass.

The value of adequate illumination, both natural and artificial, as applied to output, increased economies and protection, and in higher efficiency of the plant, is summed up in the following list of advantages, the last five of which have an important bearing on accident prevention: (1) Reduction of accidents, (2) greater accuracy in workmanship, (3) increased production for the same labor cost, (4) less eyestrain, (5) promote better working and living conditions, (6) greater contentment of the workmen, (7) more order and neatness in the plant, (8) supervision of the men made easier. These points are emphasized as forming the most important features in the problem of good lighting. "Although difficult to interpret into money values and somewhat intangible, they are indisputable arguments in favor of the best available illumination from the standpoint of the factory or mill owner."

It is estimated that, due to poor lighting facilities, workmen lose as much as one to two hours per day on certain days. "If good light will add an average of say one-half an hour per day to the output, these 30 additional effective minutes represent an increase in output of 5 per cent, brought about through an expenditure equal to one-half of 1 per cent of the wages for improved lighting, or a saving equal to ten times the expense." However, the report suggests that the principal item to consider is not the expense but the necessity of providing employees with proper and sufficient illumination from the standpoint of safety.

Reference is made to the broader possibilities presented in factory and mill lighting by the introduction of modern gas and electric lamps, including the scientific installation of the light units, suiting each to the location and class of work for which it is best adapted. In this connection the following requirements of adequate artificial lighting are presented, made all the more important, it is thought, by the peculiar limitations and the wide variety of conditions to be found in factory and mill buildings and in factory and mill work:

1. Sufficient illumination should usually be provided for each workman irrespective of his position on the floor space.
2. The lamps should be installed and selected so as to avoid eyestrain to the workmen.
3. The lamps should be operated from sources of supply which will insure reliable illumination results, particularly on account of the demoralizing effect produced by intermittent service just when the light may be most needed.
4. Adequate illumination should be provided from overhead lamps so that sharp shadows may be prevented as much as possible and in such measure that individual lamps close to the work may be unnecessary except in special cases.
5. The type and size of lamp should be adapted to the particular ceiling height and class of work in question.

6. In addition to the illumination provided by overhead lamps, individual lamps should be placed close to the work if they are absolutely necessary in the eyes of a lighting expert, and in such cases the lamps should be provided with suitable opaque reflectors.

Factory and mill lighting is classified and discussed under two general divisions: (1) Distributed illumination from lamps mounted overhead, and (2) specific illumination furnished by individual lamps located close to the work.

Illustrations are given showing the effect of lighting in factories where the mountings are at a height of less than 16 feet, between 16 and 25 feet, and over 25 feet. It is concluded that in general large lamps are not desirable for mountings under 16 feet, but for mounting heights of 16 to 25 feet they may or may not be adapted, depending on whether the reduction of shadows is of much importance, while for mountings higher than 25 feet they are to be preferred because the increased height of the lamp causes the light to fall in such directions as to distribute it evenly over the entire floor space.

The control of lamps in factory and mill lighting is believed to be important in all cases, but especially so where a large number of lamps is used in preference to a small number for a given floor area. This control should be parallel to the windows, so that all the lights not needed may be turned off without disturbing the others. Care should be exercised in locating switches.

In offering suggestions for changing a poor lighting system to an improved arrangement, the report emphasizes the need for systematic procedure involving careful study and preparation of plans, so that the work may be done with the greatest economy in time and labor, and the cost of installation distributed over a relatively long period.

The proper selection of reflectors and shades is deemed very important in securing uniform illumination for a given spacing distance and mounting height of the lamps. Also with a light ceiling the reflection of that part of the light which passes through a glass reflector to the ceiling, and which is added to the light thrown downward from the under surface of the reflector, is a factor in building up the intensity of the illumination on the working surface.

Great importance is therefore attached to light interior colors, especially on ceilings and the upper portions of walls, both in reinforcing the direct illumination and in giving diffusion, which in turn adds to the amount of light received on the side of a piece of work. It should also be stated that the intensity of the light from bare overhead lamps when measured on the working surface may be increased by as much as 60 per cent through the use of efficient reflectors.

In the selection of reflectors, whether of glass or metal, the report suggests that the following items be given consideration:

1. Utilization efficiency; how much does the reflector contribute to the effective illumination on the work?
2. The effect in reducing glare.
3. Natural deterioration with age through accumulations of dust and dirt.
4. Ease in handling and uniformity of manufacture.
5. Physical strength and the absence of projections which may increase the breakage in case of glass reflectors.

Attention is given to the necessity, in many cases, of securing adequate side lighting as well as the illumination of the horizontal surfaces of machines. This may be effected by lowering the lamps or by using broader distributing reflectors than are ordinarily necessary.

In order to avoid excessive losses of light, the report urges the importance of system in the upkeep of natural and artificial lighting equipment. Windows should be cleaned periodically, and lamps and reflectors should be regularly inspected and cleaned, and renewed immediately upon becoming out of order so as to maintain a maximum of lighting intensity.

The advantages of securing expert assistance in dealing with illumination is strongly emphasized, since the points which come up for solution are complex and require, in many cases, the judgment of one who has had wide experience in the lighting field.

Care is urged on the part of those responsible for the health and welfare of employees to see that adequate eye protection is afforded in all operations which are apt to cause injuries to eyesight if such protection is neglected. Arc welding is mentioned as typical of the causes of dangers to eyesight, where the operator wears a helmet serving as an eye shield as well as a shield for the face and head in general.

> Protective glasses for this purpose should not be judged as to their protective properties by mere visual inspection. They should, however, be analyzed for their spectral transmission of invisible radiation.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

NEW YORK.

INDUSTRIAL ACCIDENT PREVENTION.[1]

The purpose of this bulletin, issued under the direction of the New York State Industrial Commission, as suggested in the introduction, is to broaden the interest in industrial safety by showing that accidents can be prevented and by suggesting the means of accomplishing this result. The entire discussion is meant to be suggestive only, and makes no claim to be a complete treatise on the subject. In pursuance of this purpose an investigation was made of the accident experience of a number of manufacturers and public service corporations to ascertain whether any of the employers in New York State are reducing their accidents, and, if so, what means they are employing. In addition some study was made of recent safety literature, especially the bulletins published by the establishments visited and the proceedings of the National Safety Council for 1915. Employers were found universally to recognize that the goal of accident prevention is to be reached only through cooperation and the constant interchange of ideas, and this led them to give support to the investigation. The bulletin is divided into two parts: Part I shows what progress has been made in the work of accident prevention in a few of the establishments visited; Part II is a discussion of the means by which these results have been obtained.

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[1] New York. Department of Labor. Industrial Commission; Bureau of Statistics and Information. Industrial accident prevention. No. 77. Albany, 1916. 54 pp.

In charts showing the accident experience of nine plants in New York State the number of accidents which any plant has had in a given month is not indicated, the purpose being primarily to present a comparison of the accident record of each month with that of other months in the same plant, so as to bring out the relation of the accident record of each employer in 1915 with his own previous record. No attempt has been made to compare the accident prevention record of one establishment with that of another. These charts indicate the following per cent of reduction in accidents for the periods indicated:

ACCIDENT EXPERIENCE OF NINE MANUFACTURING PLANTS IN NEW YORK STATE, SHOWING PER CENT OF ACCIDENT REDUCTION FOR EACH PLANT DURING THE PERIOD INDICATED.

[The charts from which this table is compiled are constructed on an accident-rate basis.]

Name of plant.	Period.	Per cent of reduction.
American Locomotive Co.—Schenectady plant [1]	1913 to 1914	45
	1914 to 1915	30
	1913 to 1915	62
Eastman Kodak Co.—Camera plant [2]	1911-12 to 1914-15	51
Barcalo Manufacturing Co.[3]	1911-12 to 1914-15	30
Stromberg-Carlson Telephone Manufacturing Co.[4]	1912 to 1914	40
Eastman Kodak Co.—Kodak Park plant [2]	1913 to 1914-15	56
Rochester Railway & Light Co.[2]	1913 to 1915	43
New York Edison Co.[4]	1913 to 1915	38
Lackawanna Steel Co.[2]	1913 to 1915	44
General Electric Co.—Schenectady plant [5]	1913 to 1914	23
	1914 to 1915	15
	1913 to 1915	34

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[1] Only those accidents which occasioned loss of time of 5 hours or more are included.
[2] All accidents occasioning loss of time are included.
[3] All accidents occasioning loss of time of 2 hours or more are included.
[4] All accidents that caused injury which required at least first aid treatment are included.
[5] Includes all accidents occasioning loss of time amounting to more than the remainder of the shift during which the accident occurred.

A chart giving the fatal-accident experience of the Lackawanna Steel Co. indicates a reduction from 1904 to 1915 of 90 per cent. A chart showing the eye-accident experience of the American Locomotive Co. (Schenectady plant), including all eye accidents which occasioned injuries requiring medical attention, based on the rate per 1,000 employed, indicates a reduction from 1912 to 1915 of 65 per cent; based upon the number of eyes lost on account of accidents, the reduction from 1912 to 1915 is 85 per cent. A statement is given of the accident experience of each subsidiary plant of the International Harvester Co., which was one of the first to undertake the work of accident prevention in a systematic way, and the following summary, covering all plants, shows the per cent of decrease in the number of lost-time accidents per 1,000 employees for the years ending August 31, 1914 and 1915, using the accident experience for the year 1911 as the base:

PER CENT OF DECREASE IN THE NUMBER OF LOST-TIME ACCIDENTS IN THE PLANTS OF THE INTERNATIONAL HARVESTER CO. PER 1,000 EMPLOYEES, 1914 AND 1915, USING 1911 AS THE BASE.

Kind of plant.	Per cent of decrease for the year ending Aug. 31—	
	1914	1915
Manufacturing (all companies)	47	75
Steel mills	46	77
Industrial railroads	44	79

In 1906 the United States Steel Corporation began to systematize and standardize the safety work which its subsidiaries had undertaken. A chart[1] tracing the accident record for the 10 years, 1906 to 1915, shows a reduction for each year over 1906 as follows:

1907	10.40	1912	36.06
1908	18.21	1913	38.29
1909	25.28	1914	40.52
1910	43.49	1915	43.54
1911	41.26		

About two-thirds of the pamphlet is devoted to a discussion of means of preventing accidents. Based upon the theory that every accident indicates the presence of defects in materials, machines, methods, or men, or, what is perhaps most common, a combination of two or more of these elements, the report offers the following estimate by one large steel plant[2] of the distribution of the efficiency of its safety work.

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[1] In this chart serious accidents include those which caused fatality, permanent injury, loss of member or portion of member, loss of eye, or disablement for more than 35 days.

[2] It is recognized that the relative weight is not constant for all industries nor for all plants in a given industry; the suggestive nature of the table is the excuse for its presentation.

	Per cent.
Organization:	
Attitude of officers	20
Safety committees	20
Inspection (workmen)	5
Total	45
Education:	
Instruction of men	15
Prizes	9
Posting signs	3
Lectures	3
Total	30
Safeguarding:	
Safety devices	17
Lighting	5
Cleanliness	3
Total	25

The above distribution is suggestive at least of the nature of successful safety efforts. It indicates that the prevention of accidents can be effected neither by the mere parrot-like utterance of "Safety first" nor by the installation of mechanical safeguards alone. Furthermore, successful experience has demonstrated that spasmodic safety campaigns, launched with a blare of trumpets and dropped soon after, can not produce lasting results. If our industrial accidents are to be prevented or even materially reduced in number and seriousness, our efforts must be directed by well-studied plans and they must be continuous and persistent. We must realize also that after we have eliminated the grossly unnecessary accidents, the fruits of our efforts will be less apparent from year to year. But having attained a satisfactory record we must persist in our safety campaigns in order to maintain it.

The reduction of accidents depends first of all, suggests the report, upon the attitude of employers who should equip their plants with all possible safeguards and point the way to prevention of such accidents as are likely to occur through the carelessness or ignorance of workmen, the driving practices of foremen, and other defects which can not be prevented by mechanical safeguards. Foremen should be clothed with authority and responsibility in the work of preventing accidents, since they are in close touch with the men and know the hazards under which they work; they should also be taught to realize their responsibility of impressing upon workmen the necessity of being careful and attentive in their work in order to minimize the chances of accident.

Suggesting that guards on machinery need not hamper the operator and reduce output, as is maintained by some, the report emphasizes in the following words the beneficial results of safety:

> It helps to keep his organization intact, thereby increasing production and reducing the cost of manufacturing; it avoids the loss due to the time and effort required to break in new men to take the places of those efficient and trained men who drop out of the service on account of injuries due to accidents which are preventable; it saves medical fees and compensation awards in such cases; and it produces better relations between employer and employees when the latter know that the former is sincere in his efforts to protect them in their work.

Considerable attention is given to the subject of mechanical guards, and while the matter is not discussed exhaustively, it is suggested that proper safety standards can be reached only by careful scientific study of industrial hazards and of the best means of reducing them, and that by a cooperative exchange of ideas all employers may learn from each other the best known means of guarding all their machinery, this exchange being effected by visits of inspection to other plants or by cooperation with those associations which are organized to spread the gospel of safety, such as the National Safety Council. In brief, guards should be attached to the machine when it is made, should be constructed of suitable material, should be automatic in action, application, or operation, and should be designed so as to provide a ready means of access to the parts guarded.

Good shop housekeeping is suggested as a means of preventing accidents. Lighting, ventilation, and sanitation should be given careful consideration, since lack of attention to these phases of industrial hygiene was found to be responsible for a large number of preventable accidents. Fatigue being recognized as a contributing cause of accidents, occasional relaxation from work that is monotonous or which involves high speed and close attention is thought advisable. Some firms, it is stated, have brief intermissions during the hours of greatest fatigue in both forenoon and afternoon; others have a fire drill in the afternoon for the purpose of breaking the monotony of the work. In no case investigated was there complaint of a decrease in production because of time thus taken.[1]

Welfare work properly managed and conducted, it is believed, can become a powerful factor in safety work and in efficiency campaigns. The necessity of teaching employees their responsibility in the work of accident prevention is urged.

> Machines are given careful study while men—the most uncertain and at the same time the most promising factor in production—are taken for granted. The safer plan is to destroy as far as possible the interrelationship between safety and universal human shortcomings. For example, if a man's act is essential to his own or another's safety we should make it mechanically necessary for him to perform this act before proceeding with his regular work. After that we must give more attention to the study of men and we must learn how to teach them their responsibility. The proper attitude of mind must be taught to the foreman and the employer before the proper standards of safety can be reached.

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[1] Compare MONTHLY REVIEW of U. S. Bureau of Labor Statistics for June, 1916, p. 81.

The habit of taking chances, due to carelessness or recklessness or ignorance, is a mental hazard which the report suggests may be eliminated as a cause of industrial accidents.

Education as a means of preventing accidents is considered very important. It is necessary that new men be given instruction in a language which they can understand, not only in printed form, but through interpreters (for many laborers can not read the language that they speak). In this connection the practice of some factories in encouraging their employees to attend evening classes for instruction in English is noted. But more especially is education needed along safety lines, teaching the new men concerning the hazards of their work and the means of avoiding them, such instruction being given in the form of lectures, or by safety advertising in which the danger of accident is explained and pictured in graphic form. Some of the methods enumerated are: Bulletin boards, the sandwich man, general safety-first signs, signs indicating specific hazards, insert cards attached to machines or placed in pay envelopes, safety rule books adapted to the class of men intended to be reached, magazines or company organs, and moving pictures.

Safety work should be organized, declares the report. A man placed in charge should have associated with him a central committee to act in an advisory capacity. Committees of foremen and of workmen should be formed and safety councils should be organized to promote the exchange of ideas among safety directors. The functions of the workmen's committees should be educational and regulatory, the education of members being devoted largely to reducing to a minimum the physical hazard of the plant, after which attention should be given to the mental hazard, the education of their fellow employees. Regular inspections should be made and reports of unsafe conditions filed. Suggestions from workmen as to accident prevention should be encouraged, possibly by offering of prizes. Records of accidents should be kept by employers in order that information may be available as to what classes of hazards must be guarded against. It is suggested that a good plan is to afford foremen and workmen a means of checking up the progress of safety campaigns in their departments and of encouraging competition among departments in order to stimulate efforts to promote safety. A method of scoring is outlined.

Too little attention from the standpoint of accident prevention, declares the report, has been given in the past to the selection of men based upon qualifications fitting them for the jobs they seek. Now, however, a physician is employed in many plants to assist in the selection of workers, this physical examination having five purposes:

(1) To prevent new employees from bringing contagious diseases into the factory or workshop; (2) to keep out grossly defective men, those whose defects make them peculiarly susceptible to accidents; (3) to allow adjustments by transferring slightly defective applicants to work which they may perform safely; (4) to point out to the prospective employee his defects in order that he may cooperate with his own physician and the company physician to reduce these defects and thus increase his efficiency; (5) to introduce the prospective employee to the physician and the medical department so that he may know where to go in case of subsequent illness or accident in the plant.

Other functions of the medical department are the conducting of periodical physical examinations of workers, diagnosis of cases of illness, supervision of sanitation in the factory, and immediate attention to absentees. First-aid treatment should be provided at all factories; emergency rooms should be established and properly equipped; a first-aid corps, trained by a competent physician, should be organized. The importance of providing protection for the eyes of workmen is dwelt upon at some length.

The bulletin closes with a list and brief description of several so-called trivial causes of accidents, among which are noted loose clothing, slipping of ladders, hand tools, cleaning moving machinery, chain hazards, railroad hazards, trespassing on railroads, and horseplay. These indicate the complexity of the problem of prevention of accidents and the need for a careful study of the causes of accidents and the means of preventing them.

AWARDS IN NINE MONTHS' COMPENSATED ACCIDENTS.

The awards made under the New York workmen's compensation law on accidents occurring during the first nine months of its operation, are summarized in the table presented herewith. This table was prepared as a preliminary summary for incorporation in the annual report of the bureau of workmen's compensation. Pending the printing of that report (which will be a part of the report of the New York department of labor) the figures have been made available for public information.

In order that the precise scope and meaning of the figures may be understood, the following points need to be noted.

Cases and experience included.—The table includes all accidents which occurred in the nine months from July 1, 1914, to March 31, 1915, on which any award had been made up to December 31, 1915. It also includes for any such cases total compensation up to December 31, 1915. In other words, there is given total awards allowed up to December 31, 1915, on accidents which occurred during the first nine months under the compensation law.

Only compensation for disability and funeral expenses in death cases are included in the table. Data as to medical expenses paid by employers are not available.

Cases with more than one kind of award.—There are no duplications in the column showing the number of cases. Where there was more than one kind of award in any case, that case is placed in the second column according to the award indicating the most serious disability, the other awards in such cases being indicated in that part of the table which appears on page 117. Where there was more than one such other award, such other kinds are distinguished by means of footnotes. But in the fourth column (for amount of awards) is included, for cases with more than one kind of award, the total amount for all the awards, the amounts thus included outside of the amount for the award under which it is classed on page 116 being shown on page 117.

Death cases.—The amount of awards in death cases includes the total present value of award as computed according to the rules of the State fund. In the five cases included among those under (*b*) with dependents" at an average estimate as indicated by footnote, the claim was allowed, but pending investigation the exact amount had not been determined at time of tabulation.

Permanent total disability cases.—In amount of awards these cases also include the total present value of award computed according to the State fund rules.

Temporary total disability.—The distribution of these cases by weeks of disability is for weeks of total disability only, exclusive of partial disability where both kinds of disability were awarded, although, as explained above, the amount of awards includes the payments for both. In the weeks as given are included the two weeks of "waiting time."

Temporary partial disability.—Under this head the distribution by percentage of disability is shown in this table only for the cases in which this was the only kind of award.

Indeterminate.—Cases "settled by lump sum," as designated in the table, include only one class of lump-sum settlements. Where a definite kind of disability was awarded, but periodical payments were commuted to a lump sum, the case was assigned in the table to that class of disability. But in addition to such cases, there were others in which the ultimate nature of disability was never exactly determined, but in which, after continuance for some time, the parties came to an agreement to close the case for a lump sum, which sum was approved by the commission as being "in the interests of justice." Such cases were closed without definition of the kind of disability, and hence their classification under the heading "Indeterminate." The following description of these cases by the deputy commissioner in charge of the workmen's compensation bureau indicates, however, that most, if not all, of them, so far as determined, were of the nature of impaired earning capacity under permanent partial disability:

> This class arises out of injuries which we call temporary partial and in which theoretically there is ability to do some work. The law measures compensation in such cases by two-thirds of the impairment of earning capacity, which is two-thirds of the difference between what the employee may now earn and what he was earning at the time of accident. There are such cases, and hundreds of them, but employees as a rule are totally disabled temporarily and when they are able to work earn full wages. But if an employee has been injured, has recovered as much as he will ever recover and has not secured employment, or if he has secured employment at the same wage has done so through the consideration of his former employer, who will not turn away a faithful employee and yet, who with any other employer could not receive so much wages, the commission in such cases knows that it is either a question of continuing payment upon an impaired earning capacity or a purely theoretical consideration of what a man is able to earn when in fact he is not earning anything. Such a case affords peculiar difficulties and endless hearings and rehearings, with some show of ill will on the part of the insurance carrier who loses all sentiment in the matter and begins to resist the claim, or a temptation to malingering in which the claimant may seek to secure advantage out of the very doubts in the matter. So when claimant and insurance carrier come before the commission with a prayer to end the case by an award for a single amount, such amount being suggested jointly by employer or his representative and employee, the commission does not hesitate to make such award and close the case if clearly "in the interest of justice." The commission is not a party to any dickering as to amount, nor does it enforce its opinion on either party. It simply approves if justice is furthered.

The cases continuing on January 1 are cases still open on that date, and hence with ultimate nature of disability uncertain. So far as known at the time of tabulation, these were being treated practically as total temporary disabilities. The amount of awards in these cases includes total payments actually made to January 1.

Other cases under "Indeterminate" are those in which at the time of this tabulation it could not be determined whether or not disability ended prior to January 1, although the last payment made was some time before January 1. In amount of awards for these cases only actual payments made are included.

In addition to the figures given in the table the following averages derived therefrom are of interest, though the precise scope of the figures should be kept in mind if these averages are used for comparative purposes:

AVERAGE COMPENSATION PER CASE.

Class of awards.	Number of cases.	Average per case.
Death with no dependents (funeral only)	96	$97
Death with dependents (including funeral)	476	3,875
Permanent total disability	14	7,475
Permanent partial disability	2,058	520
Temporary total disability	26,161	42
Temporary partial disability	36	20
Indeterminate	579	694

SUMMARY OF AWARDS MADE UNDER THE NEW YORK WORKMEN'S COMPENSATION LAW IN ACCIDENTS OCCURRING IN THE NINE MONTHS FROM JULY 1, 1914, TO MAR. 31, 1915, INCLUDING RESULTS TO DEC. 31, 1915.

Kind of award.	Cases.		Amount (or present value) of awards.	
	Number.	Per cent of total.	Amount.	Per cent of total.
I. DEATH.				
(a) No dependents (funeral expenses of $9,070.67 in 96 cases)	96	0.3	$9,339.10	0.2
(b) With dependents (including funeral expenses in 454 cases of $44,120.19)	[1] 476	1.6	1,844,356.32	39.8
(c) Pending (estimated at average death payment)	27	.1	87,499.44	1.9
Total	599	2.0	1,941,194.86	41.9
II. PERMANENT TOTAL DISABILITY.				
(a) Dismemberments: Loss of—				
Both feet	1	.0	6,088.61	.1
Both eyes	4	.0	23,368.30	.5
Any two of these	1	.0	8,524.00	.2
(b) Other	8	.0	66,675.81	1.5
Total	14	.0	104,651.72	2.3
III. PERMANENT PARTIAL DISABILITY.				
(a) Specified dismemberments: Loss of—				
Thumb	43	.2	24,728.24	.5
First finger	172	.6	69,395.93	1.5
Second finger	100	.3	29,536.01	.6
Third finger	54	.2	14,068.94	.3
Fourth finger	75	.3	12,666.72	.3
Thumb and one or more fingers	16	.1	16,881.33	.4
Two or more fingers	120	.4	78,056.49	1.7
Phalange of thumb	149	.5	38.850.59	.9
Phalange of first finger	296	1.0	56,829.78	1.2
Phalange of second finger	211	.7	27,886.69	.6
Phalange of third finger	98	.3	11,956.63	.3
Phalange of fourth finger	80	.3	5,935.10	.1
Phalange of thumb and one or more fingers, or of two or more fingers	94	.3	28,270.85	.6
Thumb or fingers and phalange of thumb or fingers	77	.3	46,818.22	1.0
Great toe	14	.0	5,707.38	.1
Other toes	25	.1	3,754.81	.1
Phalange of great toe	21	.1	3,274.21	.1
Phalange of other toes	7	.0	706.37	.0
All or phalange of more than one toe	38	.1	17,237.15	.4
Hand	[2] 65	.2	120,114.24	2.6
Arm	25	.1	72,678.77	1.6
Foot	33	.1	60,304.23	1.3
Leg	14	.0	38,082.59	.8
Eye	222	.8	279,527.42	6.0
(b) Partial dismemberments	8	.0	6,346.28	.1
(c) Impairment of earning capacity:				
25 per cent and under	1	.0	1.238.45	.0
Total	2,058	7.0	1,070.933.42	23.1
IV. TEMPORARY TOTAL DISABILITY.				
Under 3 weeks	3,530	12.0	16.902.33	.4
3 and under 4 weeks	5,779	19.6	66,301.19	1.4
4 and under 5 weeks	4,764	16.2	98,477.85	2.1
5 and under 6 weeks	2,904	9.9	86,255.55	1.9
6 and under 7 weeks	2,379	8.1	93,335.31	2.0
7 and under 8 weeks	1,344	4.6	66,489.70	1.4
8 and under 9 weeks	1,191	4.0	68,964.83	1.5
9 and under 10 weeks	674	2.3	45.461.91	1.0
10 and under 11 weeks	553	1.9	44,140.57	1.0
11 and under 12 weeks	384	1.3	34,527.15	.7
12 and under 13 weeks	405	1.4	39,290.79	.9
13 and under 26 weeks	1,689	5.7	252.280.83	5.4
26 weeks and over	565	1.9	197,135.21	4.3
Total	26,161	66.9	1,109,570.22	24.0
V. TEMPORARY PARTIAL DISABILITY.				
25 per cent and under	6	.0	78.52	.0
Over 25 to 50 per cent, inclusive	24	.1	300.73	.0
Over 50 to 75 per cent, inclusive	6	.0	339.25	.0
Total	36	.1	718.50	.0
VI. INDETERMINATE.				
Settled by lump sum	153	.5	205,776.67	4.5
Continuing on Jan. 1	313	1.1	163,862.47	3.5
Other	113	.4	32,400.49	.7
Total	579	2.0	402,039.63	8.7
Grand total	29,447	100.0	4,629,108.35	100.0

[1] Includes five cases with estimated average death loss of $3,240.72.

[2] Includes one case employer bankrupt, no insurance; claimant settled for $288.

SUMMARY OF AWARDS MADE UNDER THE NEW YORK WORKMEN'S COMPENSATION LAW IN ACCIDENTS OCCURRING IN THE NINE MONTHS FROM JULY 1, 1914, TO MAR. 31, 1915, INCLUDING RESULTS TO DEC. 31, 1915—Concluded.

Kind of award.	Awards made in combination with awards as in first column (these amounts included in totals in fourth column on page 116).					
	Temporary disability.				Indeterminate disability (lump-sum settlements).	
	Total.		Partial.			
	Cases.	Amount.	Cases.	Amount.	Cases.	Amount.
I. DEATH.						
(a) No dependents (funeral expenses of $9,070.67 in 96 cases)	2	[1] $268.43				
(b) With dependents (including funeral expenses in 454 cases of $44,120.19)	11	1,868.15				
Total	13	2,136.58				
III. PERMANENT PARTIAL DISABILITY.						
(a) Specified dismemberments: Loss of—						
Thumb	8	263.77				
First finger	30	1,398.50			1	$134.54
Second finger	33	1,554.01	[2] 2	$31.67	1	958.55
Third finger	20	756.42			2	683.24
Fourth finger	19	2,068.68	[2] 1	2.66	1	207.72
Thumb and one or more fingers	3	137.33				
Two or more fingers	31	1,688.53			2	259.55
Phalange of thumb	9	207.79				
Phalange of first finger	35	1,149.49	1	110.40		
Phalange of second finger	38	1,013.48				
Phalange of third finger	24	783.21	[2] 1	51.48		
Phalange of fourth finger	10	271.66				
Phalange of thumb and one or more fingers, or of two or more fingers	12	283.46			1	70.50
Thumb or fingers and phalange of thumb or fingers	22	665.89			1	53.00
Great toe	5	733.18				
Other toes	10	328.93				
Phalange of great toe	2	50.48				
Phalange of other toes	5	162.69	[2] 2	19.76		
All or phalange of more than one toe	14	1,156.33				
Hand	1	80.78				
Arm	4	601.53			1	496.22
Foot	3	478.40				
Leg	1	628.18				
Eye	8	716.41				
(c) Impairment of earning capacity:						
25 per cent and under	1	138.45				
Total	348	17,317.58	7	215.97	10	2,863.32
IV. TEMPORARY TOTAL DISABILITY.						
Under 3 weeks			13	211.86		
3 and under 4 weeks			25	416.80		
4 and under 5 weeks			19	684.78		
5 and under 6 weeks			8	117.07		
6 and under 7 weeks			18	394.41		
7 and under 8 weeks			8	492.49		
8 and under 9 weeks			9	443.99		
9 and under 10 weeks			3	78.80		
10 and under 11 weeks			7	492.29		
11 and under 12 weeks			7	289.75		
12 and under 13 weeks			9	527.20		
13 and under 26 weeks			56	4,794.93	[3] 1	150.00
26 weeks and over			29	2,449.34		
Total			211	11,393.71	1	150.00
Grand total	361	19,454.16	[4] 218	11,609.68	[3] 11	3,013.32

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[1] Includes $143.50 for loss of thumb in one case.
[2] In conjunction with total temporary disability award.
[3] Includes one case in conjunction with partial temporary disability award.
[4] Includes six cases combined with total temporary disability award.

OHIO.[1]

The report of the Industrial Commission of Ohio on industrial accidents, issued under date of March 1, 1916, contains information, largely statistical, covering the first 18 months of the operation of the Ohio workmen's compensation act as a compulsory measure, January 1, 1914, to June 30, 1915. It is the third of a series of general accident reports issued by the department of investigation and statistics of the industrial commission, the first report covering the 22 months when the workmen's compensation law was a voluntary act, March 1, 1912, to December 31, 1913, and the second covering the period January 1, 1914, to June 30, 1914, the first half year of the operation of the act as a compulsory measure. The present report, therefore, is cumulative in that it includes the period covered by the second report and an additional 12 months. The purpose of the report is briefly stated in the introduction:

> It is believed that the information concerning 100,003 industrial accidents contained in the following pages will be of great assistance in the campaign of accident prevention. Any intelligent efforts to reduce the hazards of industry will take the direction of educating both employers and employees as to the causes of injury, the loss of earning power to employees due to their disability and the cost to employers of providing compensation for injuries which could have been prevented by reasonable care and by the use of proper safety devices. Such figures as those given in the following report, which show the large number of injuries to the eye and the large number of serious injuries due to infection, should go far toward convincing both employers and employees that many industrial injuries are entirely preventable.

The workmen's compensation act of Ohio provides four types of insurance to pay compensation to employees injured or to dependents of employees fatally injured by industrial accidents:

1. Payment from the State insurance fund of claims of employees injured in establishments which contribute to this fund.
2. Payment direct to injured employees or to dependents of employees fatally injured in establishments where employers carry self-insurance under the State plan.
3. Payment from the special State fund of claims of injured public employees.
4. Payment of claims of employees injured in establishments where the employer had neither paid into the State fund nor secured permission to carry self-insurance under the State plan.

Aside from the 100,003 claims allowed by the industrial commission under the workmen's compensation act, additional allowances amounting to $32,683.21 were made on 353 claims adjudicated prior to January 1, 1914. Omitting this last item, the total amount awarded was $4,401,986.16, which does not include the cost of medical and hospital attention in establishments where the employer carried self-insurance under the State plan, and was, therefore, required to furnish medical and hospital attention to injured employees without expense to the employee.

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[1] Industrial Commission of Ohio, Department of Investigation and Statistics, Report No. 21: Industrial accidents in Ohio, Jan. 1, 1914, to June 30, 1915. Columbus, 1916. 231 pp.

The following table sets forth the number of claims allowed and the amount of award, classified by each type of compensation provided by the State law:

NUMBER OF CLAIMS AND AWARDS MADE, BY NATURE OF DISABILITY, UNDER EACH SPECIFIED PLAN PROVIDED BY THE OHIO WORKMEN'S COMPENSATION ACT, FOR THE 18 MONTHS ENDING JUNE 30, 1915.

Plan.	Deaths.		Permanent total disability.[1]		Permanent partial disability.	
	Number.	Award.	Number.	Award.	Number.	Award.
First plan	429	$1,024,692.18	11	$21,474.86	1,889	$793,914.97
Second plan	136	336,090.00	5	15,896.88	468	223,539.91
Third plan	25	53,493.40	....	....	29	13,436.88
Fourth plan	26	71,799.03	2	7,469.58	31	18,218.35
Total	616	1,486,074.61	[2] 18	44,841.32	2,417	1,049,110.11
Claims adjudicated prior to Jan. 1, 1914	8	494.25	4	5,735.98	62	14,848.44
Grand total	624	1,486,568.86	22	50,577.30	2,479	1,063,958.55

Plan.	Temporary disability lasting—				Total.	
	More than 7 days.		7 days or less.			
	Number.	Award.	Number.	Award.	Number.	Award.
First plan	32,334	$1,294,327.59	36,790	$130,908.74	71,453	$3,265,318.34
Second plan	11,356	337,853.60	15,339	....	27,304	[3] 913,380.39
Third plan	745	41,952.62	225	1,597.25	1,024	110,480.15
Fourth plan	158	15,294.82	5	25.50	1,222	112,807.28
Total	44,593	1,689,428.63	52,359	132,531.49	100,003	4,401,986.16
Claims adjudicated prior to Jan. 1, 1914	257	11,513.94	22	90.60	353	32,683.21
Grand total	44,850	1,700,942.57	52,381	132,622.09	100,356	4,434,669.37

[1] Compensation for permanent total disability continues during the lifetime of the injured employee, and the expenditure shown for cases of this kind is therefore not an aggregate, but only the amount awarded during the 18 months. Cases of other kinds are also continued and additional allowances made from time to time.

[2] The average age of 17 of these cases was 33 years.

[3] The law also requires employers carrying insurance under this plan to furnish medical and hospital attention without expense to injured employees. The medical and hospital expenses are not included in this amount, whereas such expenses are included in the amounts reported under the other methods of compensation.

The total number of claims disallowed during the 18 months was 7,986, of which 7,680 were under the first plan, 53 under the second plan, 152 under the third plan, and 101 under the fourth plan.

Including all types of compensation, the total and average awards made in fatal cases during the 18 months were as follows:

TOTAL AND AVERAGE AWARDS MADE IN FATAL CASES FROM JAN. 1, 1914, TO JUNE 30, 1915.

Kind of benefit.	Number of cases.	Award.	Average award.
Death	508	$1,385,131.31	$2,726.64
Medical and hospital expenses [1]	377	17,368.92	46.07
Funeral expenses	597	81,859.09	137.12
Compensation [2]	10	1,715.29	171.53

[1] This does not include the medical and hospital expenses of injured employees of firms carrying self-insurance under the State plan.

[2] Where accidents were not immediately fatal and death benefits had not been awarded on June 30, 1915.

In 144 cases (28.3 per cent) the death benefits totaled $3,500 or over. The number left dependent by 420 (68.2 per cent) of the 616 fatally injured whose claims were allowed was 1,147 wholly dependent and 32 partially dependent.

The average compensation award in the 2,413[1] permanent partial disability cases allowed was $399.92, and the average allowed for medical and hospital expenses was $47.14.[2] In 668 cases (27.7 per cent) the amount awarded was between $200 and $500, and in each of 259 cases (10.7 per cent) the award was $1,000 or over.

Of 44,593 claims involving temporary disability for more than 7 days, the average compensation awarded was $29.80, while the average amount allowed for medical and hospital expenses was $14.50,[3] and of 52,359 claims in which disability lasted for 7 days or less, the average allowed for medical and hospital expenses was $3.58.[3]

The report classifies the causes of accidents by the primary or principal cause, for the reason, it is explained, that all preventive measures must in the last analysis be determined by this cause rather than by the immediate cause. In presenting the following table, which shows the number and per cent of accidents according to each general cause class, the report makes special reference to the causes of accidents resulting in permanent partial disability, since "a knowledge of them is necessary in order that proper steps may be taken to prevent such accidents in the future."

NUMBER AND PER CENT OF ACCIDENTS ASCRIBED TO EACH GENERAL CAUSE CLASS DURING THE 18 MONTHS ENDING JUNE 30, 1915.

Cause class.	Total number of accidents.	Number of accidents resulting in—				Per cent of accidents resulting in—			
		Death.	Permanent total disability.	Permanent partial disability.	Temporary disability.	Death.	Permanent total disability.	Permanent partial disability.[4]	Temporary disability.[4]
Machinery	25,867	112	5	1,484	24,266	0.43	0.02	5.74	93.81
Nature of material used (hot metals, corrosives, gas, etc.)	8,770	91	4	87	8,588	1.04	.05	.99	97.92
Falling and shifting objects	36,193	124	4	392	35,673	.34	.01	1.08	98.56
Carrying, lifting, or handling great weights	2,349	5	......	1	2,343	.21	......	.04	99.74
Falls	10,054	139	3	85	9,827	1.38	.03	.85	97.74
Transportation on tracks	1,715	61	1	75	1,578	3.56	.06	4.37	92.01
Transportation by water	15	12	......	......	3	80.00	......	......	20.00
Transportation not on tracks (trucks, automobiles, motorcycles, etc.)	1,170	26	1	20	1,123	2.22	.09	1.71	95.98
Animals	982	12	......	20	950	1.22	......	2.04	96.74
Hand tools and simple apparatus	9,738	5	......	225	9,508	.05	......	2.31	97.64
Miscellaneous causes	3,150	29	......	28	3,093	.92	......	.89	98.19
Total	100,003	616	18	2,417	96,952	.62	.02	2.42	96.95

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[1] Four cases in which the injured employee never made final application for compensation are not included.

[2] Does not include 468 cases reported by firms carrying self-insurance under the State plan, as the law requires that they furnish medical and hospital expenses to injured employees without charge, and 165 cases in which no medical bill was reported to the commission.

[3] This does not include medical and hospital expenses for injured employees of firms carrying self-insurance under the State plan.

[4] Some of the percentages in this column have been slightly changed as they are not correct in the original table.

As suggested in the introduction, the report shows a large number of injuries to the eyes and a large number of serious injuries due to infection. Thus of the 18 permanent total disability cases, 22.2 per cent resulted in loss of vision of one or both eyes, and of the 2,417 accidents causing permanent partial disability the eyes were affected in 385, or 15.9 per cent, of the cases. Of this latter number, 69, or 17.9 per cent, were claims in which the permanent partial disability was the result of infection. Of all permanent partial disability claims allowed, 235, or 9.7 per cent, were the result of infection. Taking the entire 100,003 accident claims allowed by the commission during the 18 months under consideration, infection was reported as having occurred in 9,024 (9.02 per cent) cases.

> In other words, infection occurred in almost 1 out of every 10 cases. It is obviously not possible to make any definite statement as to the proportion of cases in which adequate precautions would have prevented the infection, but it is safe to say that a reasonable effort to give injuries aseptic dressings would have saved much suffering, would have prevented a considerable number of permanent partial disabilities, and would have saved human lives.

Thirty-seven of these cases resulted fatally and 8,751 resulted in prolonged temporary disability. Of the 96,952 accidents resulting in temporary disability, 58,322 (60.2 per cent) were due to abrasions, bruises, contusions, crushes, cuts, and lacerations, most of which, 29,343, or 50.3 per cent, were of the hand, thumb, or fingers.

Owing to the fact that the analysis of the accident claims filed under the workmen's compensation act during the first six months of 1914 did not include data concerning time lost by reason of accidents, this portion of the report covers the 12 months ending June 30, 1915. During this period the average time actually lost as a result of the 71,400 accidents which caused temporary disability was 14 days; the average time lost for the 32,732 accidents which caused temporary disability for more than 7 days was 28.2 days; and the average time lost for the 38,668 accidents which caused temporary disability for 7 days or less was 2.1 days.

The following table shows the cost in time and money of accidents occurring during the 12 months ending June 30, 1915. The low compensation cost in the case of fatal accidents is noticeable, the average per case being $2,374.34 and the average per day lost being approximately 23 cents. This, however, is based upon a year of 365 days. Reduced to a 300-day year the compensation cost would be about 28 cents per day. In the case of permanent total disabilities compensation continues during the lifetime of the injured employee, and the total here shown, amounting to $26,507.03, is therefore not an aggregate, but only the amount awarded during the 12 months ending June 30, 1915.

COST IN TIME AND MONEY OF ACCIDENTS OCCURRING DURING THE 12 MONTHS ENDING JUNE 30, 1915.

Type of disability.	Number of cases.	Award.	Days lost.
Fatal	482	[1] $1,144,429.90	[2] 4,995,127
Permanent total disability	13	[3] 26,507.03	[4] 164,965
Permanent partial disability	1,646	[3] 718,986.00	492,066
Temporary disability	71,400	[3] 1,370,522.00	1,002,808
Total	73,541	3,260,444.93	6,654,966

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[1] Includes death benefits, medical and hospital expenses and funeral expenses.

[2] Life expectancy according to Carlisle mortality tables. Not including five cases in which the age was not reported.

[3] Includes compensation and medical and hospital expenses.

[4] Life expectancy according to Carlisle mortality tables.

The following table shows the number and per cent of accidents, by kind of injury, for the 18 months ending June 30, 1915, as compared with the 6 months ending June 30, 1914, and the 12 months ending June 30, 1915, showing a slight increase in the accidents resulting in permanent partial disability, and a slight reduction in the accidents resulting in temporary disability.

NUMBER AND PER CENT OF EACH KIND OF ACCIDENT CLAIM ALLOWED FOR THE 18 MONTHS ENDING JUNE 30, 1915, AS COMPARED WITH THE 6 MONTHS ENDING JUNE 30, 1914, AND THE 12 MONTHS ENDING JUNE 30, 1915.

Kind of injury.	Six months ending June 30, 1914.		Twelve months ending June 30, 1915.		Eighteen months ending June 30, 1915.	
	Number.	Per cent.	Number.	Per cent.	Number.[1]	Per cent.
Fatal	128	0.48	482	0.66	616	0.62
Permanent total disability	3	.01	13	.02	18	.02
Permanent partial disability	601	2.27	1,646	2.24	2,417	2.42
Temporary disabilities terminated—						
Within first week	13,692	51.74	38,668	52.58	52,359	52.36
Within second week	4,328	16.35	32,732	44.50	15,591	15.59
Within third week	2,681	10.13			10,378	10.38
Within fourth week	1,663	6.28			6,053	6.05
Within fifth to thirteenth week	3,006	11.36			11,124	11.12
Within fourteenth week or later	290	1.10			1,386	1.39
Time not determined	71	.27			61	.06
Total temporary disabilities	25,731	97.23	71,400	97.08	96,952	96.95
Grand total	26,463	100.00	73,541	100.00	100,003	100.00

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[1] Although the report under review, covering 18 months, includes the 6-month period ending June 30, 1914, and the 12-month period ending June 30, 1915, the totals given therein are not the sum of the items as given for each period standing by itself. This discrepancy is not explained. The totals in this column are taken from the report under review, as are also the totals for the 12-month period ending June 30, 1915, while the totals in the first column are taken from report No. 4, Industrial Accidents in Ohio, Jan. 1 to June 30, 1914.

During the 12-month period ending June 30, 1915, the age of 37,869 of the 73,541 injured employees was ascertained. Of this number 14,478, or 38.2 per cent, were between the ages of 20 and 30, and 10,185, or 26.9 per cent, were between the ages of 30 and 40. Only 2.1 per cent were under 18 years of age. Almost exactly nine-tenths were under 50 years. Of the employees fatally injured 56.9 per cent were under 40 years of age, the largest per cent (27.3 per cent) being between 30 and 40; of the 13 permanent total disability cases 11, or 84.6 per cent, of the injured employees were less than 40; of both the permanent partial and temporary disability cases, the largest number of injured employees were between the ages of 20 and 30 years, being 34.5 per cent in the one case and 38.5 per cent in the other. More than four-fifths of the former and almost nine-tenths of the latter were under 50 years of age.

Eliminating accidents causing death, permanent total disability, or permanent partial disability, 96,952 accident claims were adjudicated during the 18 months ending June 30, 1915. The duration of these accidents was as follows:

DURATION OF TEMPORARY DISABILITY ACCIDENTS FOR THE 18 MONTHS ENDING JUNE 30, 1915.

Time.	Number.	Per cent.
Disability terminated—		
Within first week	52,359	54.01
Within second week	15,591	16.08
Within third week	10,378	10.70
Within fourth week	6,053	6.24
Within fifth to thirteenth week	11,124	11.47
Within fourteenth week or later	1,386	1.43
Not determined	61	.06
Total	96,952	100.00

Of the 95,567 accidents in the 18-month period, for which the hour of occurrence was reported, 50.8 per cent were during the forenoon hours, the largest proportion (12 per cent) of these being between 10 and 11 o'clock. In the afternoon the hour of most frequent occurrence was from 3 to 4 o'clock, when 10.8 per cent of the accidents are reported to have occurred.

Data on length of experience of workers were secured for 42,860 of the 47,664 claims which were allowed, each involving disability of more than 7 days. Of this number 23,662 employees (55.2 per cent) had worked 1 year or more at the time of the accident.

As to the wages received by injured employees, reports were not secured in claims against the State insurance fund where the disability did not exceed 7 days. Of the 63,213 claims of other types the weekly wages were reported for 59,870 males and 1,327 females. The weekly wages of males were between $10 and $15 in 48.1 per cent of the cases, and under $20 in 85.2 per cent of the cases. For females the weekly wages were under $10 in 83.8 per cent of the cases and under $7 in 38.7 per cent of the cases.

One hundred and eighty pages of the report are devoted to 19 tables setting forth in detail the facts here briefly outlined.

WISCONSIN.

The table which is presented herewith shows the completed experience, by industry classes, on workmen's compensation insurance policies which were issued in 1914, and on which, consequently, a full year had elapsed December 31, 1915. The pay rolls and earned premiums were determined by actual audits. The compensation incurred was determined as of February 1, 1916. About 15 per cent of the compensation incurred was reported as outstanding on that date. Hence the cost of compensation ought not to be materially affected by subsequent developments. The table was made up from individual policy reports and both compensation cost and the classifications were checked with other records of the commission.

Column 3 shows the total compensation incurred, including both the indemnity and the medical benefits paid or to be paid on account of accidents which occurred while these policies were in effect.

Column 7 shows the "pure premium"; that is, the actual cost of compensation per $100 pay roll.

Columns 6 and 8 show, respectively, the premium rate actually collected on these policies and the bureau base rate on May 1, 1915. The premiums collected average substantially less than the present bureau base rates, not only on account of merit rating reduction from base rates, but also because a large percentage of the total volume of insurance was carried by mutual and nonbureau stock companies.

The totals in each column for "all industries" and for industry groups include some minor industry classes not separately shown. The rates in columns 6, 7, and 8 for "all industries" and for industry groups are weighted averages.

WORKMEN'S COMPENSATION INSURANCE EXPERIENCE OF WISCONSIN ON AUDITED POLICIES OF 1914 ISSUE.

Industry.	Audited pay roll. 1	Earned premiums. 2	Compensation incurred. 3	Number of compensable accidents. 4	Fatal accidents. 5	Premium rate collected. 6	Pure premium. 7	Bureau base rate. 8
All industries	$100,757,224	$1,510,152	$872,198	7,968	114	$1.51	$0.87	$1.61
MINING AND QUARRYING.								
Lead and zinc mining	251,795	17,889	6,751	44	1	7.10	2.68	6.09
Limestone quarrying	139,469	7,189	5,272	26	1	5.15	3.76	3.32
Quarrying, n. o. c	240,064	13,763	6,221	44	2	5.74	2.58	3.99
Sand and gravel digging	154,862	5,714	8,663	26	......	3.70	5.60	3.99
Total—Mining and quarrying	798,685	45,334	27,202	141	5	5.68	3.41	......

WORKMEN'S COMPENSATION INSURANCE EXPERIENCE OF WISCONSIN ON AUDITED POLICIES OF 1914 ISSUE—Continued.

Industry.	Audited pay roll. 1	Earned premiums. 2	Compensation incurred. 3	Number of compensable accidents. 4	Fatal accidents. 5	Premium rate collected. 6	Pure premium. 7	Bureau base rate. 8
CHEMICAL MANUFACTURING.								
Glue manufacturing	$159,314	$1,529	$777	14	......	$0.96	$0.49	$1.33
Paint manufacturing	60,687	1,025	438	3	......	1.69	.72	2.00
Soap manufacturing	125,121	1,425	417	6	......	1.14	.38	1.22
Miscellaneous chemicals [1]	203,836	3,388	1,795	16	......	1.67	.87	......
Total—Chemical manufacturing	548,958	7,367	3,427	39	......	1.35	.62	......
EARTH AND STONE WORKING.								
Brick manufacturing	268,915	4,511	4,017	18	1	1.68	1.49	1.52
Concrete block manufacturing	75,291	1,014	909	12	......	1.35	1.21	1.22
Ore crushing	149,035	3,562	4,347	28	1	2.39	2.92	3.99
Stonecutting	471,136	5,060	2,982	51	......	1.07	.63	1.73
Stone crushing	130,148	4,336	1,242	16	......	3.34	.96	3.99
Total—Earth and stone working	1,426,782	24,094	18,459	148	3	1.68	1.29	......
FOOD AND BEVERAGES.								
Bakeries	567,939	4,980	1,763	23	......	.87	.31	1.17
Breweries	3,136,904	47,167	28,207	289	3	1.50	.90	2.00
Candy manufacturing	373,412	3,396	990	13	......	.91	.27	.71
Canneries, n. o. c	927,692	13,484	4,452	52	......	1.46	.48	1.46
Cigar manufacturing, hand	373,211	1,518	79	2	......	.41	.02	.28
Condensed-milk manufacturing	217,318	2,038	1,092	18	......	.94	.51	.95
Creameries	302,885	3,591	2,248	18	2	1.18	.74	.95
Malting	307,560	5,872	4,502	15	1	1.90	1.46	2.00
Meat packing (no slaughtering)	108,166	1,763	1,041	18	......	1.63	.96	2.00
Milling, flour	457,326	11,028	4,374	26	1	2.41	.96	2.08
Milling, n. o. c	245,920	5,201	772	12	......	2.12	.31	2.08
Sausage manufacturing	177,965	3,184	1,347	21	......	1.78	.76	1.22
Tobacco rehandling	249,597	1,370	60	1	......	.55	.02	.55
Tobacco manufacturing n. o. c	159,489	1,063	22	1	......	.67	.01	.44
Total—Food and beverages	8,436,317	115,512	60,184	569	8	1.37	.71	......
LEATHER WORKING.								
Boot and shoe manufacturing	2,028,904	8,515	4,234	53	1	.42	.21	.68
Bag and portmanteau manufacturing	177,751	1,207	34	....	......	.68	.02	.68
Glove manufacturing	171,684	734	64	1	......	.43	.04	.33
Harness and saddlery manufacturing	356,211	3,164	606	8	......	.89	.17	.68
Pocketbook manufacturing	111,947	547	337	3	......	.49	.30	.55
Tanneries	1,132,260	11,780	9,737	46	3	1.04	.86	1.22
Total—Leather working	4,073,595	26,902	15,145	116	4	.66	.37	......
METAL WORKING.								
Agricultural machinery manufacturing	290,023	4,497	4,096	31	1	1.55	1.42	2.65
Brass goods manufacturing	99,858	1,221	154	1	......	1.22	.15	1.27
Boiler making	175,967	3,797	3,567	29	......	2.16	2.02	2.65
Cranes, electric, manufacturing	240,796	1,805	913	20	......	.75	.38	2.65
Enamel ware manufacturing	103,206	2,962	105	1	......	2.90	.10	2.75
Foundries, iron	462,832	7,659	5,766	33	1	1.66	1.25	1.46
Foundries, n. o. c	244,833	3,928	679	9	......	1.60	.27	1.46
Foundries, steel	220,106	3,950	2,256	21	......	1.79	1.03	2.75
Gas and gasoline engine manufacturing	422,249	4,225	2,662	28	......	1.00	.63	1.46
Machine shops, no foundry	2,290,614	24,035	18,345	172	......	1.04	.80	1.27
Machine shops, with foundry	2,522,706	34,866	14,878	204	1	1.39	.59	1.46
Malleable works	559,960	5,239	1,541	32	......	.94	.27	1.73

[1] Includes chiefly chemicals not otherwise classified, acids, varnish, beeswax, and linseed oil.

WORKMEN'S COMPENSATION INSURANCE EXPERIENCE OF WISCONSIN ON AUDITED POLICIES OF 1914 ISSUE—Continued.

Industry.	Audited pay roll. 1	Earned premiums. 2	Compensation incurred. 3	Number of compensable accidents. 4	Fatal accidents. 5	Premium rate collected. 6	Pure premium. 7	Bureau base rate. 8
METAL WORKING—concluded.								
Pipes, cast iron, manufacturing	$176,655	$3,137	$3,862	30	......	$1.77	$2.18	$3.99
Professional and scientific instruments	226,114	1,038	36	1	......	.46	.02	......
Plumbers' supplies manufacturing, n. o. c	302,926	2,857	1,404	18	......	.94	.46	.68
Sheet-metal work, shop only	775,952	9,505	5,023	60	......	1.22	.65	1.38
Spring, spring bed, and wire-mattress manufacturing	111,793	989	80	2	......	.89	.07	1.38
Steel works, structural fabricating	215,690	7,590	4,033	32	......	3.51	1.87	4.80
Stove manufacturing, not sheet metal	703,273	5,427	5,039	58	......	.77	.72	1.11
Tool manufacturing	174,062	1,166	1,044	5	......	.67	.60	.74
Total—Metal working	11,444,581	146,194	85,175	888	3	1.28	.75	......
PULP AND PAPER MANUFACTURING.								
Paper manufacturing [1]	1,447,406	25,985	27,923	235	3	1.79	1.82	2.40
Paper boxes, folding	358,600	4,366	2,471	48	......	1.22	.69	1.17
Paper boxes, solid	164,304	1,976	746	18	......	1.21	.46	1.17
Paper goods, n. o. c	120,962	640	143	4	......	.53	.12	.55
Pulp manufacturing, ground wood	655.592	14,783	7,341	126	1	2.24	1.12	2.40
Pulp manufacturing, sulphite	705.509	17,304	13,875	127	2	2.45	1.96	3.80
Saw and barking mill	178,184	5,374	3,222	28	1	3.20	1.81	3.90
Writing paper manufacturing	421,357	3,937	5,804	48	1	.94	1.37	1.27
Total—Pulp and paper manufacturing	4,357,659	78,054	66,238	674	8	1.79	1.52	......
TEXTILE MANUFACTURING.								
Bag manufacturing, burlap	117,069	298	142	1	......	.25	.12	.55
Clothing manufacturing	841,854	2,348	419	9	......	.28	.05	.23
Cloth manufacturing, wool and worsted	300,788	1,562	1,010	11	......	.52	.34	.57
Glove and mitten manufacturing, cloth	129,815	842	50	1	......	.65	.04	.23
Grass rug manufacturing	97,285	546	587	14	......	.56	.60	1.11
Hat manufacturing, straw	264,263	620	174	3	......	.23	.07	.28
Horse blanket manufacturing	81,908	586	62	1	......	.72	.08	.57
Hosiery manufacturing	196,685	763	183	3	......	.38	.09	.63
Knit goods, n. o. c	1,186,363	4,731	1,270	19	1	.40	.11	.63
Net manufacturing, not wire	135.634	801	4,345	7	1	.59	3.18	.41
Tailoring	225,188	726	472	4	......	.32	.21	.23
Yarn manufacturing	111.522	609	384	3	......	.51	.32	.74
Total—Textile manufacturing	4,122,719	17,775	11,050	95	3	.43	.27	......
VEHICLE MANUFACTURING.								
Automobile manufacturing	768,141	8,371	6,565	84	1	1.09	.86	.84
Automobile body manufacturing	433,880	4,501	1,249	20	1	1.04	.29	1.11
Carriage manufacturing	421,415	4,085	6,496	39	......	.97	1.54	1.11
Carriage and wagon manufacturing [2]	464,249	3,273	2,950	33	......	.71	.64	1.73
Car manufacturing, railroad, all kinds	72,490	1,980	2,645	20	......	2.74	3.66	2.75
Wagon manufacturing	58.809	843	332	4	......	1.42	.56	1.73
Total—Vehicle manufacturing	2,304.831	23.742	20,385	203	2	1.03	.89	......

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[1] Includes a small amount of wood-pulp making not separated on insurance reports.

[2] Mostly wagon manufacturing. Small amount of carriage manufacturing, not separated on insurance reports.

WORKMEN'S COMPENSATION INSURANCE EXPERIENCE OF WISCONSIN ON AUDITED POLICIES OF 1914 ISSUE—Continued.

Industry.	Audited pay roll. 1	Earned premiums. 2	Compensation incurred. 3	Number of compensable accidents. 4	Fatal accidents. 5	Premium rate collected. 6	Pure premium. 7	Bureau base rate. 8
MISCELLANEOUS MANUFACTURING.								
Bookbinding	$160,995	$726	$182	5	......	$0.45	$0.11	$0.68
Boot and shoe manufacturing, rubber	182,828	914	219	4	......	.50	.12	.41
Button manufacturing, pearl	66,978	650	277	9	......	.91	.41	1.06
Cleaning and dyeing	65,767	1,459	422	6	......	2.22	.64	2.40
Engraving	118,314	507	57	1	......	.43	.05	.33
Laundries, power	618,055	8,688	4,238	31	1	1.40	.69	1.38
Lithographing	297,706	1,468	169	2	......	.49	.06	.68
Newspaper publishing	515,867	3,539	676	12	......	.69	.13	.68
Artists, reporters, c. o. f., etc	127,834	155	......	......	......	.12	.00	.09
Printing	1,159,842	7,015	1,505	20	......	.61	.13	.68
Publishing	242,793	1,283	395	6	......	.53	.16	.68
Rubber mills, n. o. c	121,327	873	191	2	......	.72	.16	1.60
Tire manufacturing, rubber	266,108	2,690	2,979	45	......	1.01	1.11	1.06
Wall paper manufacturing	119,907	779	127	1	......	.65	.11	.68
Total—Miscellaneous manufacturing	4,209,344	31,884	11,577	146	1	......	......	......
WOODWORKING INDUSTRIES.								
Box manufacturing, wood	677,149	13,370	8,152	113	......	1.98	1.20	2.00
Carpentry, shop only	181,600	3,634	3,033	19	......	2.01	1.66	2.30
Cabinetmaking	275,735	3,916	1,578	26	......	1.42	.57	.71
Chair manufacturing	667,541	9,986	3,958	95	......	1.49	.59	1.27
Cooperage manufacturing	631,394	6,484	2,789	34	......	1.03	.44	3.16
Excelsior manufacturing	73,358	2,204	899	22	......	3.20	1.22	3.99
Furniture manufacturing	1,165,262	12,590	3,869	72	......	1.08	.33	1.27
Logging and lumbering	3,621,474	123,011	96,450	947	23	3.40	2.68	4.37
Logging, railroads	167,181	12,741	5,170	28	......	7.61	3.10	15.85
Piano and organ manufacturing	180,979	1,035	886	8	......	.57	.49	.57
Planing mills	940,513	18,752	8,828	94	1	1.98	.94	2.30
Refrigerator manufacturing	196,998	1,834	2,110	8	1	.93	1.07	1.27
Sash, door, and blind manufacturing	1,296,982	22,671	12,059	104	2	1.75	.93	2.30
Sawmills	2,090,029	79,024	40,926	410	6	3.78	1.95	3.99
Trunk manufacturing, wood	124,877	2,687	823	15	......	2.16	.66	2.00
Veneer package manufacturing	98,052	1,040	384	6	......	1.06	.39	1.60
Veneer manufacturing	203,522	5,366	1,695	35	......	2.63	.83	3.99
Wood turning, n. o. c	236,372	5,892	1,587	20	......	2.50	.67	2.00
Total—Woodworking industries	13,294,012	332,888	200,398	2,110	33	2.51	1.50	......
CONSTRUCTION.								
Buildings, additions, and alterations	236,415	8,419	8,291	22	2	3.56	3.52	2.51
Buildings, concrete, reinforced	154,739	8,017	7,206	36	......	5.18	4.65	5.77
Carpentry, n. o. c	991,619	30,575	20,490	152	4	3.10	2.08	4.18
Carpentry, residences	647,666	19,035	7,457	56	1	2.94	1.15	1.73
Carpentry, interior	425,254	6,210	1,022	11	......	1.46	.24	1.06
Concrete floors and pavements	479,468	12,756	4,535	44	......	2.68	.95	1.60
Contractors, frame, under three stories	358,609	10,719	5,067	35	......	2.98	1.41	......
Contractors, masonry, under three stories	247,840	9,099	3,161	24	......	3.68	1.28	......
Electric equipment installation	155,125	2,313	902	11	......	1.49	.58	1.06
Foundations, concrete	116,197	6,009	2,014	24	......	5.20	1.73	3.64
Furnace installation	118,778	2,122	231	10	......	1.78	.20	1.38
Gas and steam fitting	193,149	2,728	2,246	13	......	1.42	1.17	1.38
Marble and stone setting, interior	92,705	1,465	218	10	......	1.59	.24	1.06
Masonry, n. o. c	411,900	17,781	6,982	76	1	4.32	1.70	4.80
Masonry, residences	145,753	4,742	4,515	18	......	3.25	3.09	2.30
Millwrighting	280,111	11,327	9,578	28	2	5.44	4.60	2.30
Painting, exterior	229,902	6,820	5,012	27	1	2.98	2.17	5.01
Painting, interior	466,163	6,959	2,455	21	......	1.49	.53	1.17

WORKMEN'S COMPENSATION INSURANCE EXPERIENCE OF WISCONSIN ON AUDITED POLICIES OF 1914 ISSUE—Continued.

Industry.	Audited pay roll. 1	Earned premiums. 2	Compensation incurred. 3	Number of compensable accidents. 4	Fatal accidents. 5	Premium rate collected. 6	Pure premium. 7	Bureau base rate. 8
CONSTRUCTION—concluded.								
Paving, n. o. c	$178,429	$4,372	$2,759	10	1	$2.46	$1.55	$1.60
Plastering	287,514	2,833	2,139	19	......	.97	.75	1.81
Plumbing	503,668	7,789	4,901	34	......	1.54	.97	1.38
Road and street making	390,391	10,217	8,664	54	1	2.62	2.23	2.65
Sewers, under 7 feet	69,246	4,805	647	8	......	6.95	.94	3.32
Sewers, over 7 feet	135,066	13,625	3,081	36	1	10.10	2.28	7.60
Sheet metal erecting, exterior	135,536	7,214	5,397	30	1	5.24	3.98	5.26
Shipbuilding, iron and steel	318,536	7,378	4,455	27	......	2.21	1.40	3.32
Water mains	52,166	2,195	551	13	......	4.23	1.06	3.32
Waterworks, dams, etc	392,581	10,949	3,703	29	3	2.77	.94	4.58
Total—Construction	9,605,986	303,933	155,623	1,097	20	3.16	1.62	......
PUBLIC UTILITIES.								
Electric light and power companies	468,442	22,694	4,094	32	1	4.85	.88	4.18
Gas works, operation	66,310	1,299	2,975	13	......	1.96	4.50	1.73
Telephone companies, operation	110,902	5,043	3,919	12	1	4.55	3.54	2.75
Telephone companies, office and exchange	130,579	701	52	1	......	.54	.04	.09
Waterworks, operation and maintenance	126,698	2,180	496	6	......	1.72	.39	.95
Total—Public utilities	1,073,422	37,288	14,390	83	3	3.47	1.34	......
TRANSPORTATION.								
Chauffeurs and helpers	351,163	6,505	2,559	19	......	1.86	.73	1.60
Coal docks	1,000,045	38,308	26,171	140	3	3.83	2.62	5.01
Drivers and helpers	2,679,624	47,131	28,002	216	5	1.75	1.04	1.81
Garages	298,524	3,855	4,050	36	1	1.29	1.35	.92
Great Lakes steamers	109,814	3,854	1,004	8	......	3.50	.91	6.04
Grain elevators	331,509	7,798	9,307	31	......	2.35	2.80	2.08
Livery stables	94,869	2,276	731	8	......	2.40	.77	1.81
Stevedores, general freight	116,958	7,499	2,679	37	......	6.42	2.29	7.95
Storage, n. o. c	108,788	1,689	493	12	......	1.55	.45	2.40
Truckmen	483,762	8,512	9,475	107	1	1.76	1.95	2.30
Total—Transportation	5,887,267	137,910	86,014	644	10	2.34	1.46	......
TRADE.								
Auto salesrooms	145,934	1,984	904	12	......	1.35	.62	.92
Coal dealers, retail	420,169	10,214	4,450	81	......	2.43	1.06	3.02
Flour, feed, and grain dealers	192,408	3,149	2,902	18	......	1.64	1.51	1.06
Ice dealers	314,375	7,798	10,565	79	2	2.48	3.37	2.65
Lumber, feed, and fuel dealers	361,159	5,468	2,618	51	......	1.52	.73	1.73
Lumber dealers	1,379,802	23,477	19,105	147	3	1.70	1.38	1.73
Produce dealers	156,709	1,344	1,168	11	......	.91	.75	1.06
Stores, butcher	203,522	1,203	5,964	39	1	.59	2.92	.84
Stores, clothing	418,725	1,442	93	4	......	.34	.02	.17
Stores, department	1,652,435	9,253	1,997	28	......	.56	.12	.41
Stores, dry goods, large	349,741	1,457	213	3	......	.42	.06	.17
Stores, dry goods, small	254,032	1,067	242	3	......	.42	.10	.28
Stores, furniture	190,505	875	648	7	1	.46	.34	.84
Stores, general	544,656	2,214	770	13	......	.41	.14	.28
Stores, grocery	382,391	2,028	344	13	......	.53	.09	.41
Stores, hardware	616,161	3,022	1,816	31	......	.49	.30	.28
Stores, machinery	101,808	922	941	11	1	.90	.92	.49
Stores, retail, n. o. c	2,114,376	8,364	5,553	36	1	.39	.26	.28
Stores, wholesale	1,021,826	5,295	3,157	35	1	.52	.31	.49
Stores, wholesale and retail	267,454	1,100	265	6	......	.41	.10	.28
Saloons, wine and spirit merchants	222,820	1,535	1,135	18	......	.69	.51	.66
Total—Trade	11,711,098	97,435	66,839	665	10	.83	.57	......

WORKMEN'S COMPENSATION INSURANCE EXPERIENCE OF WISCONSIN ON AUDITED POLICIES OF 1914 ISSUE—Concluded.

Industry.	Audited pay roll. 1	Earned premiums. 2	Compensation incurred. 3	Number of compensable accidents. 4	Fatal accidents. 5	Premium rate collected. 6	Pure premium. 7	Bureau base rate. 8
MISCELLANEOUS.								
Clerical office force	$10,320,472	$17,443	$1,669	27	......	$0.17	$0.016	$0.09
Doctors and nurses	100,676	295	21	2	......	.29	.02	.25
Elevator operators	252,994	2,270	5	....	......	.90	.00	1.11
Farming	799,540	14,518	7,497	78	......	1.89	.94	1.52
Hotels	1,014,893	7,229	3,687	60	......	.72	.36	.60
Ice harvesting	124,078	5,532	4,792	56	......	4.45	3.87	4.80
Moving-picture theaters	101,199	700	14	....	......	.69	.01	.95
Buildings, care, custody, and maintenance	904,255	10,469	5,445	37	1	1.16	.60	1.11
Restaurants	648,551	5,026	2,056	37	......	.78	.32	.68
Salesmen, outside	2,026,519	4,466	1,138	17	......	.22	.06	.14
Teachers and preachers	205,769	537	319	3	......	.26	.15	......
Threshing	128,656	7,908	2,630	23	......	6.10	2.04	6.30
Theaters, care and custody	196,151	1,381	219	1	......	.70	.11	1.11

METAL-MINE ACCIDENTS IN THE UNITED STATES DURING 1914.[1]

A recent report of the Bureau of Mines (Technical Paper 129) deals with metal and miscellaneous mineral-mine (except coal-mine) accidents in the United States during 1914. It includes statistics relating to copper mines, gold and miscellaneous metal mines, iron mines, lead and zinc mines (Mississippi Valley), and miscellaneous mineral mines.

In 1914 the number of fatal accidents in these mines, as reported by 4,805 operators, was 559, and the total number of men employed was 158,115. Both of these figures represent a decrease from 1913, when the figures were 683 and 191,276, respectively. The fatality rate, however, shows only a slight decrease in 1914, being 3.54 per 1,000 men employed as against 3.57 in the preceding year. A number of States show a slight increase in the fatality rate, but most of the principal mining States show a reduction, in some cases as much as 50 per cent, and these, it is stated, "are to be accounted for largely by the introduction of safety appliances, better supervision, a stricter enforcement of rules and regulations and a close observance of State laws. Practically all of the larger companies, and many of the smaller ones, have done much in safeguarding their employees, and have helped to spread the 'safety-first' movement."

Of the 158,115 workers, 101,618 were employed underground and 56,497 on the surface. Aside from the fatalities, the record of injuries due to accidents is as follows: Serious injuries,[1] 5,073, or 32.08 per 1,000 men employed; slight injuries, 25,143, or 159.02 per 1,000. Of the 559 deaths, 466 (83.36 per cent) are chargeable to underground work, the fatality rate being 4.59 per 1,000, while 93 (16.64 per cent) were killed in surface accidents, the fatality rate being 1.65 per 1,000 men employed. The irregularity of ratio between serious and slight injuries, it is explained, is due to the lack of uniformity in State laws, or entire absence of such laws, requiring detailed records of injuries.

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[1] U. S. Bureau of Mines: Metal-mine accidents in the United States during the calendar year 1914. Compiled by Albert H. Fay. Technical Paper 129. Washington, 1916. 96 pp.

More than one-third (37.56 per cent) of the fatal accidents was due to falls of ore or rock from roof, wall, or bank; 16.11 per cent to falling down stope shaft, winze or bank; 10.73 per cent to explosives, and 8.96 per cent to haulage systems. Of the serious injuries 32.48 per cent were due to falls of roof, wall, or bank; 16.38 per cent to car and haulage systems; 10.97 per cent to timber and hand tools, and 7.94 per cent to machinery. Thirty-four per cent of the slight injuries were due to falls of roof, wall, or bank; 12.54 per cent to car and haulage systems; 12.29 per cent to timber and hand tools, and 7.88 per cent to machinery. Mine fires caused 10 fatalities in 1914, none in 1913, 1 in 1912, and 37 in 1911. Fatalities due to falling down shaft were 34, as compared with 26 in 1913, 40 in 1912, and 57 in 1911.

The following table summarizes the number of men employed and the number killed and injured in all metal mines (except coal mines) in the United States during 1914, as compared with the three preceding years:

NUMBER OF MEN EMPLOYED AND NUMBER KILLED AND INJURED IN AND ABOUT METAL AND MISCELLANEOUS MINERAL MINES (EXCEPT COAL MINES), CLASSIFIED BY KIND OF MINE, IN THE UNITED STATES DURING THE CALENDAR YEAR 1914, COMPARED WITH THE THREE PRECEDING YEARS.

Kind of mine.	Active operators.	Employees.	Average number of days worked.	Killed.			Seriously injured.[2]			Slightly injured.[3]		
				Number.	Rate per 1,000 employed.	Rate on 300-day basis.	Number.	Rate per 1,000 employed.	Rate on 300-day basis.	Number.	Rate per 1,000 employed.	Rate on 300-day basis.
Copper	585	44,686	287	165	3.69	3.85	2,037	45.58	47.57	11,339	253.55	264.62
Gold and miscellaneous metal	3,536	48,438	273	179	3.70	4.06	911	18.81	20.64	4,690	96.82	106.26
Iron	196	44,807	262	148	3.30	3.78	1,851	41.51	47.28	6,922	154.48	176.79
Lead and zinc (Mississippi Valley only)	248	10,935	254	40	3.66	4.32	146	13.35	15.76	1,605	146.78	173.26
Miscellaneous mineral	240	9,249	235	27	2.92	3.72	128	13.84	17.64	596	64.44	82.12
Total	4,805	158,115	271	559	3.54	3.92	5,073	32.08	35.57	25,143	159.02	176.29
1913	6,378	191,276	288	683	3.57	3.72	5,890	30.79	32.09	27,081	141.58	147.51
1912	5,967	169,199	287	661	3.91	4.09	4,502	26.61	27.85	26,232	155.04	162.26
1911	5,232	165,979	282	695	4.19	4.45	4,169	25.12	26.71	22,408	135.01	143.56

[1] In this report a serious injury is one disabling a man and keeping him from duty 20 days or more; a slight injury is one that involves a loss of time of not less than 1 day nor more than 20 days.

[2] Involving loss of 20 days or more.

[3] Involving loss of less than 20 days, but more than 1 day.

The report comments on the unfairness of making comparisons of accidents in the various States based on the actual number of men reported as working instead of reducing the number of employees in each State to the equivalent of 300-day workers. The difference in the results arrived at by each method is illustrated by a comparison of the records of two years in the preceding table. It will be seen, for example, that the fatality rate in 1914, based upon the number of men reported as working, was 3.54, and in 1913, 3.57, whereas, reduced to a 300-day basis, the fatality rate in 1914 was 3.92, and in 1913, 3.72. Thus with a longer working period in 1913 than in 1914, the fatality rate in the former year was lower on a 300-day basis than it was in 1914, while on the basis of actual number of men reported as working, the fatality rate was higher in 1913 than in 1914.

Data were gathered relating to the classification of mine accidents based on specific systems of mining, as follows: (1) Overhand stoping, confined to narrow veins; (2) overhand stoping, confined to wide veins and large ore bodies; (3) room and pillar method (without timber); (4) caving systems and their various modifications; (5) open pit, with steam shovel; (6) open pit, without steam shovel. Two hundred and fifty-eight returns, representing 361 fatal accidents, are tablulated showing that the fatality rate is highest (5.76 per 1,000 employed) where the room and pillar method is used, with the overhand stoping system responsible for the next highest fatality rate, 5.23.

Comparative data for metal mines, coal mines, and quarries covering the years 1911, 1912, 1913, and 1914 are presented. Here it is shown that the fatality rate in metal mines during 1914, as already indicated, was 3.54 per 1,000 employed, and that the fatality rate in coal mines was 3.22 and in quarries, 2.05. The comparison between metal and coal mines, says the report, "is not absolutely fair, for the reason that the metal miners worked 271 days as compared with 207 days for the coal miners. Thus the men in the metal mines were exposed to the mining risk 64 days longer than were the coal miners." If the rates be reduced to the 300-day basis, the metal mine fatality rate, as shown in the table following, becomes 3.92 per 1,000 300-day workers in comparison with 4.67 for the coal miners and 2.64 for quarries.

FATALITY RATES IN DIFFERENT BRANCHES OF MINERAL INDUSTRIES IN 1914 COMPARED ON A 300-DAY BASIS.

[Length of shift not considered.]

Branch of mineral industry.	Actual days active.	Employees.		Killed.	Number killed per 1,000 employed.	
		Actual.	On 300-day basis.		On actual basis.	On 300-day basis.
Metal mines	271	158,115	142,619	559	3.54	3.92
Ore-dressing plants	302	14,501	14,576	23	1.59	1.58
Smelting plants	349	26,960	31,384	33	1.22	1.05
Coal mines	207	763,185	526,598	2,454	3.22	4.67
Coke ovens	286	22,313	21,241	45	2.02	2.12
Quarries	233	87,936	68,187	180	2.05	2.64

Classified by part of body injured, it was found that the largest number of accidents in metal mines (12.6 per cent) resulted in broken legs, with injured fingers second (7 per cent).

The bureau collected data showing the number of men employed and the number of accidents at ore-dressing plants and smelters for the years 1913 and 1914. At ore-dressing plants in 1914, 14,501 men were employed and at smelters, 26,960. The fatality rates at the metallurgical plants are considerably lower than in the mining industry. The serious injuries at ore-dressing plants and smelting plants are also less than at the mines, while the slight injuries at smelters are slightly in excess of those reported for the mining industry as a whole. At ore-dressing plants the number killed and injured in 1914 was 1,211 compared with 1,670 in 1913, and at smelting plants 4,658 in 1914 compared with 3,507 in 1913.

In discussing the responsibility for mine accidents figures are cited from the records of the Department of Mines, Union of South Africa, and the report states that the actual responsibility for a mine accident is often a delicate question and the answer depends largely on the person making the report.

> There is a natural tendency to shirk responsibility and to throw the blame on the other party whenever possible. It is difficult to obtain an unbiased report on accidents unless they are investigated by some disinterested person, and this is not always done. There is carelessness of both the miner and the management. Little information is available showing to what extent the personal character or tendency of the miner and his coworker, the mine foreman, or the superintendent and others in authority, enters into the causes of accidents. Many accidents are due to the inexperience of the miner, his failure to heed orders, a misunderstanding of instructions, and, last but not least, carelessness of himself or fellow workers. A foreman or superintendent may fail to give proper warning regarding the conditions of certain parts of the mine; he may not have inspected certain stopes, rooms, or entries on the day of an accident; the mine may not be properly equipped, or the operator may neglect to comply with the inspector's recommendations. Evidently, there is a personal equation of both the operator and the miner which must be considered.

The figures as cited in the report represent the mining industry of South Africa, where a large majority of the miners are Kaffirs and where it would be an easy matter for the inspector to shift the burden of responsibility onto the miner.

The Kaffirs in their native land are not miners, and have absolutely no knowledge of machinery, electricity, or explosives when they begin work in the mines; yet the figures show that less than one-fourth of the fatal accidents are due to the carelessness and the ignorance of these uneducated laborers. Although seemingly it would not have been difficult to shift the burden of the responsibility onto the Kaffir, the figures quoted show the responsibility of the miner to be about equal to that of the operator, and represent the unbiased result of the inspector's work. If these figures be taken as a standard, the percentage of accidents due to these causes should be less in the majority of the mines in the United States, especially in those mines where English-speaking labor is employed. Where there is an excess of inexperienced laborers that do not speak English, it would seem that conditions similar to those in mines in South Africa should prevail.

MASSACHUSETTS COMMISSION ON SOCIAL INSURANCE.

The Legislature of Massachusetts, just before ending its 1916 session on June 2, passed a resolve providing for the appointment of a special commission to be known as the commission on social insurance, "to study sickness, unemployment, and old age in Massachusetts, to collect facts as to actual experience with the several forms of insurance therefor, and to recommend such legislation as it deems practical and expedient to protect the wage earners of the Commonwealth from the burdens of sickness, unemployment, and old age or any one or more of these." This commission is composed of two members of the senate—Messrs. Farnsworth and McLane—four members of the house of representatives—Messrs. Catheron, Bowser, Woodill, and Morris—and three persons to be appointed by the governor. It is directed to submit its report to the general court, with drafts of such laws as it may recommend, not later than the first Wednesday in January, 1917. The cooperation of the State department of health and the bureau of statistics is authorized and directed and the commission is directed to give such public hearings as may be necessary.

DECISIONS OF COURTS AFFECTING LABOR IN 1915.

Legislatures write laws, but until the courts have interpreted them the real effect is often uncertain. The United States Bureau of Labor Statistics annually prints not only the labor laws enacted in the country as a whole but also a careful selection of the decisions of the various courts of superior rank showing the application of such laws to concrete cases. Important decisions under the common law are given as well, the annual bulletin on the subject thus affording a valuable work of reference in its field.

The volume covering the year 1915 has just appeared as Bulletin 189 of this bureau, and presents in condensed form the salient points in some 270 cases. As heretofore, a summary statement of the facts in each case is given, followed by quotations embodying the vital points of the decision, the volume being prefaced by a review of the cases considered, indicating the effect of the rulings of the courts. Aliens, armed guards for work places, employers' liability and workmen's compensation, boycotts, blacklists, strikes, and injunctions, the rights of members of trade-unions to resist expulsion from membership, wage payments, and work time—these and almost every other incident of the employment relation are touched upon in one or several cases.

Most numerous are decisions relating to workmen's compensation, the scope and effect of this new type of law being not yet fixed with sufficient clearness to preclude a considerable amount of litigation. However, this represents but a fraction of the number of cases settled under these acts, many adjustments taking place almost automatically. Some attacks were again made last year on the constitutionality of such laws, but none was successful. An interesting point discussed is as to the application of the law of a State to cases of employees injured in interstate commerce. The Federal liability law applies where the employer is negligent, and the Illinois courts hold this to be the full measure of the employer's liability; while the courts of New York and New Jersey take the position that the State can add a duty to compensate cases where there is no negligence, requiring the employer to make payments under the State law.

Likewise diverse are the rulings as to whether injuries received outside the State can be compensated for under the State law, courts of New York, New Jersey, and Connecticut making awards in such cases, while those of Massachusetts hold the contrary. Questions of the inclusion or exclusion of diseases incurred by reason of occupation also lead to contrary decisions by the courts of the different States, even where the terms of the acts are practically identical.

As in all recent years (since the enactment of the Federal law of 1908), the question of what employees on railroads are engaged in interstate commerce, and therefore entitled to sue under the Federal liability law, gives rise to many difficulties, and the rulings are far from harmonious, though clarifying decisions have been rendered by the Supreme Court of the United States. The same is true of the hours of service and safety appliance acts of Congress applicable to railroads, under which several decisions appear.

Laws of Arizona, California, the District of Columbia, and New York limiting the hours of labor of women were held constitutional, while the act of Massachusetts was construed to include a woman serving as a cashier and bookkeeper as being "employed in labor." The early closing law of Utah for mercantile establishments was declared unconstitutional as not within the police power of the State in the form in which it was enacted, and also as special legislation, on account of its exceptions. This last defect was fatal also to a Louisiana statute relating to the hours of labor of stationary engineers in certain cities of the State.

Interesting decisions affirm the right of members of associations of workmen or employers to be protected against unlawful expulsion from membership in such organizations, recognizing its value as an economic asset. Laws of Ohio and Oklahoma undertaking to prevent the discharge of workmen on account of such membership were, however, held unconstitutional. Other decisions worthy of mention in this connection construe collective agreements between employers and labor organizations, the union being compelled to reimburse the employer in a case where it had reduced the union rate of wages without notice to him and he had continued to pay the higher rate fixed upon in an earlier agreement.

These are but a few of the cases noted in the 290 pages of decisions, besides which there are the analytic introduction and review and the indexes. The bulletin furnishes the most complete and indeed the only current review of the subject matter in existence, and merits the attention of all persons interested in the legal status of employer and employee.

DECISIONS OF THE SUPREME COURT AFFECTING LABOR.

The Supreme Court of the United States at its term just closed (June 12) had before it several cases of interest to labor, two or three being of special importance. By its decision in St. Louis, Iron Mountain & Southern Railway *v.* Arkansas (36 Sup. Ct., 443) it sustained the constitutionality of the full crew law of Arkansas, enacted in 1913.

Important cases that have been before the court for varying periods, but on which no decisions have yet been reached, are those involving the minimum wage law of Oregon (Stettler *v.* O'Hara and Simpson *v.* O'Hara, see Bulletin 169, pp. 172–177); and the case involving the 10-hour law of Oregon covering general employments and including male employees (Bunting *v.* Oregon, see Bulletin 169, p. 120). The first two of these cases were argued in December, 1914, and were under consideration until June 12, when they were ordered restored to the docket for reargument at the term of court opening October, 1916, as was the Bunting case, argued in April of the current year. A short summary of the brief submitted by the attorneys for the State in the last-named case was given in the REVIEW for June (pp. 23–29). An order for reargument was also made with reference to a New York (Federal court) case involving unlawful combinations and the attempt of labor organizations to prevent the use of the product of a particular manufacturer. (Paine Lumber Co. *v.* Neal, Bulletin 169, p. 164.) This case was argued in May, 1915.

A group of cases from the New York courts regarding the application of the workmen's compensation law of that State to employees in interstate commerce (Jensen *v.* Southern Pacific Co., Bulletin 189, p. 221; Winfield *v.* New York Central & Hudson River R. R., Bulletin 189, p. 254), and one or two other cases, were argued in February of the current year, and remained under advisement at the end of the term. The importance of these pending cases and the necessity for adjusting the conflicts of jurisdiction between the Federal Government and the States having compensation laws were emphatically pointed out by Hon. A. J. Pillsbury, chairman of the Industrial Accident Commission of California, in an address delivered at the Third Annual Meeting of the International Association of Industrial Accident Boards and Commissions. This address is summarized in the June REVIEW (pp. 54 and 55).

The minimum wage cases have attracted special attention because of the effect that a decision of unconstitutionality would have on such legislation in other States. Pending a decision by the Supreme Court, no attempt is being made to enforce the minimum wage law in Minnesota, the work of the Massachusetts Minimum Wage Commission is almost at a standstill, and a similar situation prevails in Wisconsin, Michigan, California, and most of the other minimum wage States.

COURT DECISIONS ON POWER OF STATE INDUSTRIAL COMMISSIONS TO ISSUE ORDERS.

BY LINDLEY D. CLARK.

The Supreme Court of Wisconsin, on May 2, 1916, declared unconstitutional the provision of the law of that State which sought to confer upon the State Industrial Commission the power to make regulations as to the hours of labor of employed women. (State *v.* Lange Canning Co., 157 N. W., 777.) This decision opens up the whole subject of the status of such bodies, in the creation of which the State of Wisconsin was a pioneer, having established its commission in 1911, giving to it supervision of the conditions of employment, with power to issue and enforce orders affecting them, the fixing of standards of safety to be used, and requiring the adoption of safety devices and other measures for the protection of the life, health, and security of employees.

The idea has had a rapid extension, and the importance of the decision denying the validity of the principal grants of power is evident from a consideration of the fact that commissions or like bodies with similar powers were established in the States of New York, Ohio, and Pennsylvania in 1913; and in Colorado, Kansas, and Montana in 1915. Laws establishing minimum wage boards with power to investigate and determine minimum wages are found in Arkansas, California, Colorado, Massachusetts, Minnesota, Nebraska, Oregon, Washington, and Wisconsin. In Massachusetts and Nebraska failure of the employer to adopt the findings of the minimum wage boards incurs no penalty, while in the other States violation is a misdemeanor.

There is no dispute whatever as to the status of children as being within the power of the Government to determine the conditions of their employment. The power to regulate the hours of labor of women is likewise generally conceded at the present time, though this conclusion was not reached without a prolonged struggle and some adverse rulings by the courts. Conditions of safety in work places generally are subject to reasonable regulation by the legislature, so that the only subject as to which the question remains open is that of minimum wages, and as to this but one decision of a higher court as to constitutionality has as yet been announced. In Stettler *v.* O'Hara (139 Pac., 743; Bul. No. 169, p. 173), the Supreme Court of Oregon upheld the minimum wage law of that State as constitutional. An appeal to the Supreme Court of the United States has been once argued (December, 1914), and at the sitting of the court on June 12, 1916 a reargument at the next term was ordered.

The question therefore is not one of the propriety of regulating the subjects mentioned so much as that of the method by which the regulation is to be accomplished, and it is this that is held to be at fault in the Wisconsin decision referred to. In the case in hand there was a prosecution for the violation of the State law fixing the hours of labor of women. The law prescribes 10 hours as the maximum daily service period where the work is done between 6 a. m. and 8 p. m., and 8 hours where the employment is night-work; i. e., between 8 p. m. and 6 a. m. The employer assumed the remarkable position that by beginning employment later in the day, say at 9.30 a. m., employment might be continued to any length, since a part of the work would fall before 8 a. m. and a part after—a situation as to which the law made no provision.

The statute fixed the hours of labor above noted and also provided for other regulation by the industrial commission, the schedule fixed by the act to be in force and effect until such time as the commission should take action. The supreme court characterized the contention of the employer as to the nonapplicability of the law as absurd if the law was itself valid. It then proceeded to determine whether or not the grant of authority to the commission to fix the hours of labor was within the power of the legislature, and the effect of such grant on the law as a whole. The power of the legislature itself to make laws for the protection of women and children by prescribing the hours of employment and the conditions under which work should be done was recognized, but the conclusion was reached that it could not be delegated to any other body, the court saying that the power to declare what classes of occupations are prejudicial to the health and welfare of women so as to warrant regulation is vested in the legislature, that it is its duty and function to declare in a general way under what conditions women should be allowed to labor, and that this is a duty which can not be delegated. "The rule forbidding the delegation of legislative power is based upon experience, and is vital to the maintenance of the integrity of our system of government." It is further said that if the people of the State desire to have vested in some constituted authority the power to make such minute regulations as to the conditions of employment of women, and the amount of wage which they shall receive, they should secure an amendment to the constitution vesting such power in an appropriate body. However, the finding that this portion of the law is unconstitutional was held not to affect the validity of that portion fixing the hours of labor until superseded by an order of the commission—which, under this decision, can never take place.

It will be observed that in this opinion the court indicated an attitude adverse to the industrial commission not only in the exercise of its powers to issue orders, but also of its power as a minimum wage board, though this, being granted by a separate law (ch. 712, Acts of 1913), was not properly before the court. It is of interest to note in this connection that Chief Justice Winslow, while concurring in the conclusion that the law fixes the hours of labor constituting a day's work in all cases to which it applies, whenever begun or ended, withheld his assent to that portion of the opinion which considered the constitutionality of the provisions granting power to make orders. The chief justice took the position that this discussion was not essential to the case, and stated that when a case should come before the court involving the necessity for a consideration of the matter of the delegation of legislative power he would wish to give it more careful examination than was then possible. As the matter now stands, however, the provision of the law under consideration is held unconstitutional by a majority opinion, one justice taking no part and the chief justice withholding his assent.[1]

The recent enactment of the laws of the class under consideration precludes the possibility of any considerable number of authoritative legal opinions in the exact field. However, as the principle of the delegation of legislative powers is the real question at issue rather than the particular subject matter on which such powers are to be exercised, it will be of interest to examine the views of other courts on this point. It must not be overlooked in any case that the subject matter must necessarily be within the police power of the State, so that the legislature could properly regulate it, and with this in mind it is evident that cases relating to railways, forest reserves, or what not may be illustrative only if the question is one of the power to delegate legislative authority. Not all the decisions noted will be found to be on one side, nor are they all equally pertinent, but cross-citations by the courts and the evident inclusion of identical principles bring them within the range of profitable consideration in this connection.

Most directly in point is the case already referred to (Stettler *v.* O'Hara, 139 Pac., 743), in which the Supreme Court of Oregon took the ground that the State had power to determine both wages and hours of labor for women and children, and that granting to a commission, created for the purpose, power to fix standards after investigation was not a delegation of legislative authority. It was said that the commission was only authorized to ascertain facts that will determine where the law is to apply, and this not arbitrarily, but after a hearing. The fact remains, however, that the law itself did not establish rates to be applicable under certain conditions, but does give the commission the power to declare what hours and wages seem to it reasonable, and a failure on the part of the employer to comply with such order, is a misdemeanor.

Another case that is significant, though the question of constitutionality was not raised, is one very recently decided by the Court of Appeals of New York. (Mautsewich *v.* United States Gypsum Co., 112 N. E., 471.) The point involved was the failure of a mine operator to comply with certain rules established by the commissioner of labor of the State, the statute requiring that the commissioner of labor shall "see that every necessary precaution is taken to insure the safety and health of employees employed in the mines and quarries and in the construction of tunnels of the State, and shall prescribe rules and regulations therefor." (Ch. 399, Acts of 1907.) The commissioner of labor, among other particulars, prescribed procedure in blasting, directing all blasting to be done by one man and his helper, designated for that specific purpose, and setting forth details as to inspection, return of workmen, etc. As already stated, no question was raised as to the constitutionality of the law delegating such authority, but the rules so formulated were held by the court to be binding upon the employer, and if not obeyed, he is to be held liable criminally, as well as being subject to the civil consequences arising from negligence. This gives to the rules issued by the commissioner the same effect, and to a considerable degree the same status, as laws formally enacted by the legislature.

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[1] The view of the chief justice that the provision of the law relative to the powers of the industrial commission to issue orders was not in question in the case before the court was shared by the commission itself, and by the attorney general of the State. It is the announced purpose of the commission to secure a rehearing of the case, and steps have been taken to that end. In the meantime it is said that no modifications of the statute will be attempted by the commission, but it will endeavor to secure the enforcement of the act according to its own construction of its intent; i. e., that the law recognizes but two classes of service—nightwork and daywork, 8 p. m. being the point of division; and that if a woman is employed for more than one night in the week after that hour she is to be classed as a nightworker and restricted to 48 hours of service per week.

Very apropos, too, is the decision of the United States courts in a case in which they were called upon to pass upon the validity of an Ohio statute (p. 181, Acts of 1914), which authorized the industrial commission of the State to fix a proper tare for impurities in coal where the amount mined was used as the basis of wage payments. This law was held to be constitutional (Rail & River Coal Co. *v.* Yaple, 214 Fed., 273), on the ground that discretion must be allowed where comprehensive automatic language is impossible—a finding which the Supreme Court affirmed (35 Sup. Ct., 359), over the direct contention that there was an unconstitutional delegation of legislative authority.

In a number of States railroad commissions have been created with authority to fix rates and otherwise regulate the operation of the roads. Thus the statute of Texas of April 3, 1891, creating a railroad commission, granted it authority to prescribe rates, fix charges, and make regulations for the government of railroad freight and passenger tariffs, with power to correct abuses and prevent unjust discrimination and extortion. The Supreme Court of the United States (Reagan *v.* Farmers' L. & T. Co. (1894), 154 U. S., 362; 14 Sup. Ct., 1047) held that such a commission was merely an administrative board to carry into effect the will of the State, citing an earlier decision of its own (1886), in which the statute of Mississippi of like effect was upheld. Similarly a Federal court of lower rank in passing upon the Oregon statute of 1907, establishing a railroad commission, said that there was no constitutional objection to the legislature fixing rates either itself directly or through a commission, subject to judicial decision as to the unreasonableness of its acts. (Oregon R. & N. Co. *v.* Campbell, 173 Fed., 957.)

The Federal Congress in the exercise of its control over interstate commerce has perhaps gone farther than any State in conferring authority upon the Interstate Commerce Commission to fix standards of safety, inquire into the management of business, regulate rates, call for reports as to the violation of the hours of service acts, etc., etc. Acting under this grant of power the commission has made rules and orders covering practically the whole field, including details of regulation impossible for a legislative body to prescribe, since they must be based on expert information and a knowledge of conditions such as are possible only to a continuing investigative body.

In all of these, as in other matters with which the commission is charged, there is practically uniform support by the courts, though some of the powers are truly legislative while others border on the judicial. Thus it is said by the Supreme Court of the United States (Prentis *v.* Atlantic Coast Line (1908), 211 U. S., 210; 29 Sup. Ct., 67), that the establishment of a rate is the making of a rule for the future and is therefore a legislative act. In another case (Interstate Commerce Commission *v.* Railway Co. (1897), 167 U. S., 479; 17 Sup. Ct., 896), the court said: "It is one thing to inquire whether the rates which have been charged and collected are reasonable—that is a judicial act; but an entirely different thing to prescribe rates which shall be charged in the future—that is a legislative act." In a later case the same court in passing upon this question said that prescribing railroad rates for the future is a legislative act in the performance of which the legislature might act directly, or, in the absence of constitutional restriction, it might commit the authority to fix rates to a subordinate body. The investigative process of hearing and determination before fixing rates was said not to be a judicial act, but merely preliminary to the legislative act (Louisville & N. R. Co. *v.* Garrett (1913), 231 U. S., 298).

The power of the Interstate Commerce Commission to fix specific rates for freight between certain interstate points for a fixed period was challenged in a case that came before the Supreme Court (Houston & Texas Ry. *v.* U. S. (1914), 234 U. S., 342), in which the court held that since Congress has power over interstate commerce, it can provide for the execution of its purposes through the aid of a subordinate body. This phase of the question was well summed up by a Federal judge in a case (Louisville & N. R. Co. *v.* I. C. C., 184 Fed., 118), in which it was said that opinions of the Supreme Court declared the power to fix rates to be legislative in its nature, while a long series of decisions by the court determined that such legislative powers concerning the administrative affairs of the Government may be delegated to an officer or a board and when so delegated may be as fully exercised as by the legislature itself, subject to any limitations imposed by the legislature.

In considering the provision of the act to regulate commerce which authorizes the Interstate Commerce Commission to prescribe forms of accounts, records, and memoranda relative to earnings, receipts, expenditures, balances, movement of traffic, etc., the contention was made that a distinction should be drawn between form and substance, and that the commission might not interfere with the internal affairs of the corporation. The Supreme Court held (Kansas City Southern Ry. *v.* U. S. (1913), 231 U. S., 423), that the power of supervision is full and no system would be complete without requiring uniformity of details; that the law lays down general rules of action and the commission applies those rules to situations and circumstances by establishing and enforcing administrative regulations, and in this there is no unconstitutional delegation of legislative powers. It was pointed out in a later case (United States *v.* Louisville & N. R. Co. (1915), 236 U. S., 318) that the power to make such inquiries into questions of management as the law prescribes did not extend beyond the boundaries fixed by the statute itself, so that a mere resolve of one House of Congress did not give authority for further investigation, and no writ would lie from a court to secure the carrying out of any such proceeding.

The act in question authorizes compulsion to secure the attendance of witnesses, orders being secured from the circuit courts to this end, and refusal to obey such orders constitutes contempt of court. On this point it was said (Interstate Commerce Commission *v.* Brimson (1894), 154 U. S., 447; 14 Sup. Ct., 1125) that—

> It was clearly competent for Congress to invest the commission with authority to require the attendance and testimony of witnesses, etc. The method of compelling attendance is within the power of Congress to prescribe, and that chosen is not an unconstitutional delegation of judicial power.

It was further said that—

> All must recognize the fact that the full information necessary as a basis of intelligent legislation by Congress from time to time upon the subject of interstate commerce cannot be obtained, nor can the rules established for the regulation of such commerce be efficiently enforced otherwise than through the instrumentality of an administrative body representing the whole country, always watchful of the general interests, and charged with the duty not only of obtaining the required information, but of compelling by all lawful methods obedience to such rules.

In delivering this opinion the court cited the well-known early opinion, McCulloch *v.* Maryland (1819), 4 Wheat., 316, where it was said:

> A sound construction of the Constitution must allow to the National Legislature the discretion with respect to the means by which the powers it confers are to be carried into execution, which will enable that body to perform the high duties assigned to it in the manner most beneficial to the people,

the limitations being that such procedure must be within the scope of the Constitution and consistent with its letter and spirit.

The Interstate Commerce Commission is authorized to fix a standard height for drawbars of freight cars, which was done in consultation with the railroads themselves, and when a determination was reached the order was fixed, and has been enforced as an absolute requirement resting upon the railroads, to which they must conform. This action was held not to amount to an unconstitutional delegation of legislative power. (St. Louis & I. M. Ry. *v.* Taylor (1908), 210 U. S., 281; 28 Sup. Ct. 616). The specific order as to couplers was cited as valid in a later case (Pennell *v.* Philadelphia & Reading Ry. (1914), 231 U. S., 675; 34 Sup. Ct., 220); while the orders requiring all overtime to be reported have been enforced in recent cases before federal courts of lower rank, sustaining entirely the authority of the commission in these details (United States *v.* B. & O. R. R. (1915), 226 Fed., 220; Same *v.* Yazoo & M. V. R. R. (1913), 203 Fed., 159).

Powers conferred in a somewhat different field, but still applicable to public utilities, were involved in a West Virginia case (Manufacturers' Light & Heat Co. *v.* Ott, 215 Fed., 940), in which the power of the public service commission of the State to investigate and ascertain what are reasonable charges for public utilities (natural gas, in the present instance) was passed upon. It was held that to create a board with such powers was not unconstitutional as conferring legislative, executive, and judicial powers upon one body, as was contended, the court saying that it was merely an agency for carrying out the legislative scheme with respect to public-service corporations. Appropriate in this connection is the statement of the Supreme Court of Illinois (Sheldon *v.* Hoyne, 261 Ill., 222; 103 N. E., 1021), to the effect that while the legislature can not divest itself of the power to determine what the law shall be, it may authorize others to do those things which practically it can not do itself, since the government could not be carried on if nothing could be left to the judgment and discretion of administrative officers.

The State Board of Health of Indiana is authorized (p. 189, Acts of 1899) to make regulations as to minimum standards for food products, adulterations, etc. This was held by the Supreme Court of that State not to be an unconstitutional delegation of legislative authority. (Isenhour *v.* State, 157 Ind., 517; 62 N. E., 40.) In this case the court quoted from its opinion in an earlier case (Blue *v.* Beach, 155 Ind., 121; 56 N. E., 89), in which it was said that—

> In order to secure and promote the public health, the State creates boards of health as an instrumentality or agency for that purpose and invests them with the power to adopt ordinances, by-laws, rules and regulations necessary to secure the objects of

their organization. While it is true that the character or nature of such boards is administrative only, still the powers conferred upon them by the legislature in view of the great public interest confided to them, have always received from the courts a liberal construction, and the right of the legislature to confer on them the power to make reasonable rules and regulations is generally recognized.

A Massachusetts statute gave to commissioners provided for by the act the power to fix the height of buildings in the city of Boston. This act was challenged as an unconstitutional delegation of legislative authority, whereupon the Supreme Court of the State ruled that—

> The power to make rules and regulations in the nature of subsidiary legislation may be delegated by the legislature to a local board or commission; such rules being subject to be tested in the courts to determine whether they reasonably are directed to the accomplishment of the lawful purposes of the statute under which they are made. (Welch *v.* Swasey, 193 Mass., 364; 79 N. E. 745.)

A similar view is taken in the case of an Illinois statute giving an inspector power to decide as to the location, number, materials, and construction of fire escapes. (Arms *v.* Ayer, 192 Ill., 601; 61 N. E. 851.) A Pennsylvania statute confers on a prescribed committee the duty of determining the necessary width of boundary pillars to be left in coal mines. The Supreme Court of the United States held (Plymouth Coal Co. *v.* Pennsylvania (1914), 232 U. S., 531; 34 Sup. Ct., 359) that it was competent for the legislature to lay down a general rule and to establish an administrative tribunal with authority to fix the appropriate width or thickness in the particular conditions. "It has become entirely settled that powers and discretion of this character may be delegated to administrative bodies, or even to a single individual;" citing In re Kollock (165 U. S., 526), in which it was held proper to authorize the Commissioner of Internal Revenue to make regulations as to marks, stamps, and prints for oleomargarine; and Jacobson *v.* Massachusetts (197 U. S., 11), in which the grant of authority to city boards of health was upheld where they were authorized to prescribe and enforce regulations for vaccination if in their opinion vaccination was necessary to public health and safety.

It may be noted in this connection with this last citation that the Supreme Court of Wisconsin declared invalid the action of a city board of health in undertaking to enforce vaccination regulations of its own prescription, where it was shown that there was no impending danger of an epidemic of smallpox. (State *v.* Burdge, 95 Wis., 390; 70 N. W., 347.) This same tribunal, however, sustained the civil service law of the State, which permits a commission to make rules to regulate the exercise of its own powers and confers on it the authority to classify offices, places, and employments, to determine exemptions, suspend the operation of the rules, etc. It was said that there was here no arbitrary and uncontrolled discretion, and that the action was not legislative in character, but was the performance of an executive and ministerial duty within the regulations provided in the act. "Only such rules are authorized as serve to provide the details for the execution of the provisions of the law in its actual administration, to fix the way in which the requirements of the statute are to be met, and to secure obedience to its mandates" (State *v.* Frear, 146 Wis., 291; 131 N. W., 832).

Not quite so directly suggestive of the conditions presented in the particular subject of discussion, but nevertheless involving its principle, are rulings on various acts of Congress conferring power on the Secretary of War to decide when a bridge is an unreasonable obstruction to free navigation, to make orders relative to any changes desired, and fix a time for compliance therewith; authorizing the Secretary of the Interior to determine what irrigation system shall be built and maintained for the purpose of reclaiming arid lands, and the amount to be expended thereon; authorizing the Secretary of the Interior, and later the Secretary of Agriculture, to make rules for the regulation and government of forest reserves, regulating their occupancy and use and securing their preservation; and authorizing the Secretary of the Treasury to fix and establish standards as to importations of tea on findings and recommendations of a board of experts. In all these cases the power conferred has been sustained by the United States courts. In referring to the first case noted it was said (Monongahela Bridge Co. *v.* U. S. (1910) 216 U. S., 177), that instead of exerting its power by direct legislation in each case, Congress charged the Secretary of War with the duty of ascertaining whether a particular bridge came within the general rule prescribed, and that any other method was impracticable. With reference to the forest reserves it was said that the rules to be prescribed were administrative and not legislative, that Congress can not delegate legislative power, and that while it is difficult to set exact bounds, administrative rules will not be called legislative from the mere fact that their violation involves punishment (United States *v.* Grimaud (1911), 220 U. S., 506; 31 Sup. Ct., 480); while in the establishment of standards for tea it was said that there was no delegation of legislative authority, since Congress had acted as far as reasonably practicable, and then left with executive officials the duty of bringing about the result pointed out by the statute (Buttfield *v.* Stranahan (1904), 192 U S., 470).

The following cases either deny the powers above approved, or hold that the proper bounds of such powers had been transgressed. A statute of Missouri undertook to provide that insurance companies might agree on a uniform fire insurance policy, which, when approved by the State insurance commissioner, would thenceforth be binding, no standards or limitations being prescribed. This was held by the supreme court of that State to be an unconstitutional delegation of legislative powers, and in so far void (Nalley *v.* Home Insurance Co., 157 S. W., 769). A similar statute of Pennsylvania was held unconstitutional because the act did not fix terms or conditions of the policy, and because it delegated the power to prescribe forms and conditions of the policy and restrictions to be added to or made a part of it to a single individual without reporting, review or publication, but to be binding upon a mere filing (O'Neil *v.* Insurance Co., 166 Pa. 72, 30 Atl. 943).

Another Missouri statute that was declared unconstitutional was one that proposed to authorize the Board of Railroad and Warehouse Commissioners to establish a State system of grain inspection when and where it should be thought necessary, with no indication of the legislative intent beyond the mere grant of power (Merchants' Exchange *v.* Knott, 212 Mo., 616; 111 S. W., 565). A similar objection was made to an Ohio statute which undertook to provide a board for the examination and licensing of steam engineers without fixing any standards of attainment or specifications as to wherein the applicant should be "trustworthy and competent," as the act declared he should be (Harmon *v.* State, 66 Ohio St., 249; 64 N. E., 117). Similarly, it was declared that the legislature of Colorado could not delegate to the courts the power to classify occupations and employments to which a law fixing the hours of labor of women should apply. Certain occupations were named which it was said might be held unhealthful, "in the discretion of the court," so as to make the prescribed limitations apply, and the supreme court of the State held that such discretion rested in the legislature alone (Burcher *v.* People, 93 Pac., 14).

To this list may be added the case of Schaezlein *v.* Cabaniss (135 Cal., 466; 67 Pac., 755), in which a law was held to attempt an unconstitutional delegation of legislative powers where the installation of such mechanical contrivances as it appeared to a factory inspector would to a great extent alleviate injurious conditions was put in the power of such inspector without establishing any standards, but leaving all to his discretion; and the New York case (People *v.* Klinck Packing Co., 214 N. Y., 121; 108 N. E., 278), where the commissioner of labor was authorized to exempt certain occupations in his discretion from the operation of a weekly rest law, without statutory guidance for his decisions.

It is not intended, however, to exhaust possible illustrations on either side, but it seems evident from the weight of authority so far as discovered that administrative or executive bodies or persons may legally be intrusted not only with the determination of facts as to when specific provisions of law are operative, but that, as in the exercise of powers of the Interstate Commerce Commission or the commissioner of labor (now industrial commission) of New York as to mines, there may be a drafting of rules and regulations that accord with the legislative intent, but go far beyond its expression as to details and specific requirements. The New York statute just referred to has stood as valid law since 1907 and the principle therein contained would appear to be broad enough to sustain the grant of power to the existing industrial commission in drafting its "industrial code."

While the question of the distribution of powers between the three principal branches of government—executive, legislative, and judicial—is set forth in the Constitution of the United States, it is also contained in the State constitutions, and it is the constitution of Wisconsin that is cited by the court in the Lange case as preventing the enactment of such a law as that therein declared unconstitutional. It does not seem probable, therefore, that the State can bring the question of constitutionality before the Supreme Court of the United States under the new legislation (act of Dec. 23, 1914, 38 Stat., 790) which authorizes the review by the Supreme Court of cases decided by State courts where there is a decision against the validity of a State statute claimed to be repugnant to the Constitution or laws of the United States. So far as appears from the decisions above noted, there is a very considerable field open for the activities of commissions and executive officials in the matter of supplying details of regulation and the application of law, without transgressing the boundaries usually set for such bodies in the exercise of legislative or quasi-legislative powers.

PRINCIPLES OF LABOR LEGISLATION.

One of the most important books on labor of the year is Prof. John R. Commons and Dr. John B. Andrews' "Principles of Labor Legislation." The scope of this work is indicated by the chapter headings: The basis of labor law, Individual bargaining, Collective bargaining, The minimum wage, Hours of labor, Unemployment, Safety and health, Social insurance, and Administration.

The philosophical and economic bases for labor legislation, as developed in the United States, are presented, and considerable attention is given to foreign countries. The development of the present status of the employed person is traced from primitive conditions, emphasizing the growth of the idea of legislative action to secure a more approximate equality of bargaining capacity between the parties to the labor contract. Naturally, the ideas of the common law occupy but a small portion of the work, merely enough to serve as a background for the development of the laws that have undertaken to secure conditions of health and safety, to prevent unemployment, to provide social insurance, and secure efficient and intelligent application and administration of the laws enacted. The economic aspects of labor legislation and the function of the courts in interpreting the law are brought out and the worthlessness of labor legislation without adequate provision for enforcement is strongly emphasized.

The recognition of the inequality of bargaining power between the employer and the employee—developed by the Supreme Court in the case of Holden *v.* Hardy (169 U. S., 366)—forms the basis of labor legislation.

> It is by recognizing this inequality of bargaining power, coupled with a public purpose, that the courts pass over, in any particular case, from the theory of class legislation to the theory of reasonable classification. The two are identical in one respect; all classification is class legislation, but the kind of class legislation which the courts condemn is that which they consider to be "unreasonable" classification. Class legislation benefits or burdens one class against others where there is no real inequality or no public benefit. "Reasonable" classification benefits or burdens a class where there is real inequality to be overcome and a public benefit to be attained. That which is class legislation at one time may become reasonable classification at a later time, if the court perceives that what it once thought was equality is really inequality, and what it once thought was merely private benefit is also public benefit (p. 30).

Thus it is maintained that "the history of the constitutionality of labor legislation in the United States has been a history of the theory of classification" (p. 30), as applied in the interpretation of the police power before the courts.

"Collective bargaining" is treated fully and with originality. The view of the authors is indicated by the following quotation:

> Viewing the situation from the point of view of the practical results, the conclusion is reached that the law to-day seriously restricts labor in its collective action, while it does not interfere with the parallel weapons of the employers. Is this result socially desirable? Fundamentally the question is whether collective bargaining by labor should be encouraged or discouraged. If collective bargaining is desirable, organized labor must be conceded the free use of the methods through which it can secure and maintain trade agreements. The right of organization is valueless unless it is accompanied by the right to make the organization effective (pp. 115, 116).

The underlying theory justifying this point of view in the minds of the authors is the distinction made between the price bargain and the wage bargain, between the merchant function and the employer function. The price bargain and the merchant function, it is noted, have been the object of restraint under conspiracy laws, but the employer function has been more or less unrestricted, and, therefore, as a matter of even-handed justice, the wage bargain from the side of the employee should likewise be free from the restriction of the conspiracy laws. Although the bargaining power of the employee has been maintained by strikes, boycotts, and picketing, these have frequently been held as illegal.

> These are the weapons through which labor secures and maintains collective bargains with employers. Collective agreements are worthless without a strong union to back them up. They are not enforceable in courts of law. The unwilling employer is kept from violating them only through fear of a strike. Real collective bargaining implies equal strength upon both sides. It results only when each side is aware of the strength, ability, and willingness of the other. Then a joint conference is held and a compromise is effected. Neither will violate the agreement while the other party maintains its strength. Thus, it will be seen that restrictions upon the weapons which labor may employ in trade disputes are in fact limitations of its right to bargain collectively (pp. 111, 112).

The chapter on "Administration" is perhaps the most important contribution to the history and theory of legislation. By "Administration" is meant the fourth ultimate class into which the general theory of government may be divided. To this new branch of government—

> is coming to be assigned the function of investigation of those economic and social conditions upon which the several branches of government base their decisions. While these functions can not be separated in practice, yet they stand out as characteristic of each branch of government. Execution, discretion, interpretation, and investigation are the four great divisions in the functions of officials, and the executive, the legislature, the judiciary and the administration are the four branches that are specialized for these functions (p. 20).
>
> Administration is more than mechanism. It is a method of legislation. It is the means of investigating, drafting, and adopting enforceable laws. It is the means of getting and keeping competent officials. It is the method of determining what authority or powers the officials shall have, how they shall execute the laws, what procedure they shall follow in court, what facts they shall investigate for the use of the court in its duty of interpretation. Administration is legislation in action (p. 415).

PUBLICATIONS OF THE NATIONAL CHILD-LABOR COMMITTEE.

The February number of the Child-Labor Bulletin, the first issue for 1916, appears in two parts, Part I of which is devoted to editorial comment and items of interest, but the bulk of which is an article on child labor in the sugar-beet fields of Colorado, written by Edward N. Clopper and Lewis W. Hine. The article deals with working and housing conditions, earnings, and hours of labor, while particular attention is given to the effects upon school conditions of labor of children in the beet fields.

Part II of this bulletin is a brief on the constitutionality of the Keating-Owen bill by Thomas I. Parkinson. This bill, which passed the House on February 7, 1916, aims to prevent the shipment in interstate commerce of articles in the manufacture of which child labor has been employed. This brief contends—

> That the commerce clause of the Constitution authorizes Congress to prohibit the transportation in interstate commerce of specified persons or things; that Congress possesses power similar to the State's police power to regulate or prohibit commerce in the

interest of public health, safety, welfare, or morals; that in the exercise of this police power under the commerce clause Congress is limited only by the provision of the fifth amendment to the Federal Constitution, which prohibits the taking of property or liberty without due process of law; and that despite the fifth amendment Congress may enact valid police regulations if they be reasonably necessary to remedy existing conditions detrimental to the public good.

"Cutting Down the Waste of Child Labor" is the title of a pamphlet published in April, issued jointly by the New York and the National Child-Labor Committees, presenting the facts about the employment of children in New York and other leading industrial States. It was prepared in support of amendments to the child-labor law of New York, proposing the raising of the age of employment from 14 to 16 years. The brief aims to show the social waste that is claimed to result necessarily by permitting thousands of children to leave school at 14 years of age to commence a period of unprofitable toil and intermittent idleness. It is pointed out that generally speaking only low-grade positions are open to child workers; that as a consequence there is frequent changing of jobs by child workers; that juvenile delinquency is aggravated by working conditions; and that industrial life impairs the health of child laborers. Poverty can not be said to be a valid reason for the employment of children, it is declared, because as a matter of fact the additional earnings of child workers are very insignificant and their equivalent can and should be supplied by other agencies. Finally, typical cases are cited to show that many employers condemn child labor.

Other pamphlets issued by the National Child Labor Committee, being Nos. 250 to 260, are in some instances reprints from the bulletin. No. 260, March, 1916, however, is a brief monograph on the child in the cotton mill, presenting a survey of working conditions, wages, hours, accidents, etc., as disclosed by the Federal investigation of the Bureau of Labor Statistics in 1907–1908. The brief is issued in behalf of the Keating-Owen bill, to which reference has already been made.

A list of recent publications of the National Child Labor Committee, New York, including those mentioned above, follows:

The Child Labor Bulletin, February, 1916. 2 parts.
  Contents: Part 1: Editorial notes; "Aged 12, has worked two years"; Child labor in the sugar-beet fields of Colorado; court decisions affecting child labor. Part 2: A brief for the Keating-Owen bill.

Pamphlet No. 250. Constitutionality of a Federal child-labor law. House Bill No. —; Senate bill No. 1083. Thomas I. Parkinson, Nathan William MacChesney. (Reprinted from Child Labor Bulletin, Vol. IV. No. 1, May, 1915, and Vol. IV. No. 3, November, 1915.) January, 1916. 20 pp.

Pamphlet No. 251. Do you know why the Keating-Owen bill to regulate child labor demands your active support? December, 1915. 7 pp.

Pamphlet No. 252. Who made what you buy? December, 1915. 4 pp.

Pamphlet No. 253. Program for Child-Labor Sunday. December, 1915. 4 pp.

Pamphlet No. 254. Program for Child Labor Day. December, 1915. 4 pp.

Pamphlet No. 255. Eleventh annual report of the general secretary of the National Child Labor Committee for the fiscal year ending September 30, 1915, Owen R. Lovejoy. (Reprinted from the Child Labor Bulletin, Vol. IV, No. 3, November, 1915.) January, 1916. 12 pp.

Pamphlet No. 256. Supporters of the Keating-Owen bill. January, 1916. 8 pp.

Pamphlet No. 257. Keating-Owen bill, Senate 1083. In the Senate December 7, 1915. H. R. 8234. In the House of Representatives January 7, 1916. A bill to prevent interstate commerce in the products of child labor, and for other purposes. January, 1916. 2 pp.

Pamphlet No. 258. What the newspapers say about the Keating-Owen bill. January, 1916. 4 pp.

Pamphlet No. 259. Child labor in the sugar-beet fields of Colorado, by Edward N. Clopper and Lewis W. Hine. (Reprinted from the Child Labor Bulletin, Vol. IV, No. 4, February, 1916.) March, 1916. 36 pp.

Pamphlet No. 260. The child in the cotton mill. March, 1916. 10 pp.

Pamphlet (unnumbered). Cutting down the waste of child labor. Facts about child employment in New York and in other leading industrial States. Compiled by the New York and the National Child Labor Committees. April, 1916. 15 pp.

CONDITIONS PREVAILING IN THE COAL MINING INDUSTRY IN GREAT BRITAIN.

The coal mining organization committee of the Home Department, appointed to inquire into conditions prevailing in the coal mining industry due to the war, recently presented its second report. The first report of the committee, which was noted in the Monthly Review of July, 1915 (Vol. 1, No. 1, p. 56), dealt with the effects of the war on the industry during the first six months of its continuance; the second report covers the first 12 months of the war and notes the results achieved by the remedial measures suggested in the first report of the committee.

The loss of coal output, the committee estimates, has amounted to about 30,000,000 tons for the year commencing at the outbreak of the war; yet this loss in output it now appears is 6,000,000 tons less than the committee had expected at the time of their first report. This is a decrease of about 11 per cent on the output of a like period before the war. Nor is this loss in output as great as it would have been if it had been proportional to the decrease in the numbers employed in the industry, as the loss of labor due to enlistments amounted to nearly 16 per cent.

The increased efficiency of output is explained as due to less avoidable absenteeism on the part of the men and greater regularity of employment, and it is noted that if there had been no avoidable absenteeism, which seems to continue to some extent, the output would have been increased, the committee estimates, from 13 to 14 million tons per annum. At the same time, in considering the question of absenteeism and the productive capacity per man employed, it is noteworthy that the new accession of labor to the mines which has taken the place of the enlisted labor is probably not as efficient as the labor displaced.

As reports were not received covering all mines, and as some operators in reporting stated that until recently no record of enlistment of their employees had been kept, data relative to the extent of enlistment are not complete, but it has been possible to prepare an approximately accurate statement of the extent of enlistments of coal-mine workers.

The following table based on returns from operators shows the number of persons on the pay rolls in July, 1914, number and percent of enlistments for the first 13 months of the war, and for the 6 months period March to August, 1915:

PERSONS ON PAY ROLLS JULY, 1914, NUMBER AND PER CENT OF ENLISTMENTS, JULY, 1914, TO AUGUST, 1915, AND MARCH TO AUGUST, 1915.

Items.	Persons on pay rolls July, 1914.	Enlistments, August, 1914, to August, 1915.		Enlistments, March to August, 1915.	
		Number.	Per cent.	Number.	Per cent.
Returns received	1,009,157	235,332	23.3	52,058	5.2
Estimated total number	1,116,648	250,750	22.5	56,850	5.1

Absenteeism, the committee found, was lowest in Scotland and highest in England. The districts having the thinnest seams of coal and where the coal is hardest to get show, generally speaking, the best results as to regular attendance at work.

The actual gain in the number of days worked per week during the 6 months period, March to August, has been a trifle less than 2 per cent in 1915 as compared with 1913. Thus the average number of days worked per week during the period in question was 5.54 in 1913, 5.23 in 1914, and 5.62 in 1915.

The committee took up the question of the suspension of the 8-hour act, but suggested that the question should be discussed by representatives of the workmen and of the employers, and felt that the suspension should not be considered until it was seen how far the joint efforts of owners and workmen to increase output had been successful.

Labor disputes were considered by the committee and the form of agreement which had been entered into between the mine owners and the workmen at the mines in Lancashire was recommended. This agreement would bind both parties to continue existing contracts during the period of the war and six months thereafter. Provision is also made for the orderly settlements of disputes by conciliation and arbitration.

Considerable work in maintaining the level of output has been accomplished by postponing developments and renewals ordinarily necessary, and by concentrating the work of getting coal in the easier places in the mines.

The problem of transportation, both railway and shipping, seems to have been particularly bothersome. Facilities of transportation have been affected by lack of available locomotive power and rolling stock. As a remedy the committee suggests the possibility of some system of pooling among the railroad managers.

The committee notes that the price of pit timber has increased so considerably as materially to affect the industry unless some check be interposed.

The first table which follows shows the disposition made of the output of coal in the United Kingdom during the first year of the war and the corresponding year preceding the war.

The second table is a summarized table of the amount of coal produced, the number of persons employed and the amount of absenteeism at coal mines in the United Kingdom during March to August, 1914 and 1915.

DISTRIBUTION OF THE COAL OUTPUT OF THE UNITED KINGDOM, AUGUST, 1913, TO JULY, 1914, AND FROM AUGUST, 1914, TO JULY, 1915.

Tons.	August, 1913, to July, 1914.	August, 1914, to July, 1915.
Exported	76,065,000	46,458,000
Used in foreign bunkers	21,162,000	14,934,000
For home use and admiralty	183,849,000	188,965,000
Total output	281,076,000	250,357,000

Month and year.	Tonnage raised.[1]	Number employed—		Number of shifts—		Per cent. of loss.
		Below ground (A).	Above ground (B).	Which could have been worked by (A) and (B).	Actually worked by (A) and (B).	
1914.	*Tons.*					
March	21,542,288	834,702	182,381	23,841,916	21,238,371	10.9
April	23,027,943	831,554	182,254	20,585,308	18,515,633	10.1
May	24,426,206	834,885	182,407	23,502,145	21,166,919	9.9
June	20,488,321	833,604	182,414	21,332,444	19,098,915	10.5
July	19,150,568	827,764	181,393	22,884,756	20,451,388	10.6
August	16,030,858	801,667	178,300	18,692,837	16,595,658	11.2
Total	124,666,184	4,964,176	1,089,149	130,839,406	117,066,884	10.5
1915.						
March	19,075,189	702,629	168,032	21,783,497	19,537,585	10.3
April	22,613,382	696,007	167,441	19,868,113	17,836,430	10.1
May	22,558,183	691,015	167,552	20,131,992	18,161,432	9.8
June	18,556,001	687,578	166,788	20,843,148	18,894,940	9.3
July	17,218,149	685,511	166,440	20,055,030	18,144,260	9.5
August	17,549,892	682,440	166,207	19,803,317	17,799,911	10.1
Total	117,570,796	4,145,180	1,002,460	122,485,097	110,404,558	9.9

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[1] The tonnage of coal raised was furnished independently of the other particulars and relates to the following periods: Four weeks ended Mar. 27, 5 weeks ended May 1, 5 weeks ended June 5, 4 weeks ended July 3, 4 weeks ended July 31, and 4 weeks ended Aug. 28, in the year 1915 and corresponding periods of the year 1914.

PUBLIC EMPLOYMENT OFFICES IN QUEENSLAND, AUSTRALIA.[1]

The establishment of public employment offices was brought about in Queensland, Australia, by an act dated October 25, 1915. Hitherto the Government had operated an employment bureau under administrative orders without formal recognition or establishment by law.

The labor exchanges act of 1915 provides for the establishment and maintenance in Brisbane, the capital, and in other places, of free employment offices under the direction of the Department of Public Works. The functions of these State exchanges are not only to secure employment but also to encourage wage earners to insure themselves against distress from unemployment. Other duties may be prescribed by the competent minister, who is given large powers of administrative discretion. The State exchanges may cooperate with existing private exchanges which, under this act, are henceforth required to be licensed and subject to Governmental inspection.

Any State labor exchange is authorized to make advances by way of loans toward meeting the expense of persons seeking employment who are required to travel to places where employment has been found for them through an employment office.

Every employer under the act is required to make an annual statement of the names, addresses, occupations, periods of service, and apparent ages of persons employed by him during the preceding calendar year on or before such day as directed by the competent minister. Employers who are already making such returns under existing acts as, for instance, the factories and shops act of 1900, are exempt from this requirement. The required report need not include persons employed less than 30 days during the year.

For private licensed offices the responsible minister in charge of the administration of this act is authorized to prescribe a scale of fees chargeable by private employment offices; this scale of fees must be kept posted in a conspicuous place in the private office. The registration fee is to be repaid, less any net expenses incurred by the office in attempting to secure any particular position, if employment is not secured through the office within 30 days after registration. The private employment office is prohibited from sharing the fee with the employer. It is likewise prohibited from keeping as lodgers any persons seeking employment or to have any interest in the keeping of a lodging house for such persons.

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[1] The Queensland Industrial Gazette, issued by the Department of Labor. Brisbane, Vol. 1, No. 2 (Apr. 10, 1916), p. 106.

False statements or entries of licensed offices relating to work or employment to any one who registers for employment are penalized. Punishments for infraction of the act do not exceed a fine of £10 ($48.67) or imprisonment not exceeding two months; but every conviction against a licensed employment office must be indorsed on the license by the court before which such conviction is secured, and upon a third conviction within three years the license must be canceled.

IMMIGRATION, APRIL, 1916.

The number of immigrant aliens admitted into the United States during each of the first five months of 1916 has been in excess of the number admitted during the corresponding months of 1915, thus showing a recovery, as it were, since the war began, in the influx of immigration to this country. There has also been an increase from month to month in 1916. These facts are brought out in the statement following:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS 1914, 1915, AND 1916.

Month.	1914	1915	1916	
			Number.	Per cent increase over preceding month.
January	44,708	15,481	17,293	8.5
February	46,873	13,873	24,740	43.1
March	92,621	19,263	27,586	11.5
April	119,885	24,532	30,560	10.8
May	107,796	26,069		

Classified by races, the immigrant aliens admitted into and emigrant aliens departing from the United States during April, 1915 and 1916, were as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, APRIL, 1915 AND 1916.

	Admitted.		Departed.	
	April, 1915.	April, 1916.	April, 1915.	April, 1916.
African (black)	256	287	111	119
Armenian	29	92	4	13
Bohemian and Moravian	102	45	3	1
Bulgarian, Servian, Montenegrin	248	317	104	2
Chinese	142	100	137	111
Croatian and Slavonian	107	44	9	3
Cuban	97	185	569	69
Dalmatian, Bosnian, and Herzegovinian	8	6	....	....
Dutch and Flemish	605	481	52	54
East Indian	1	2	8	3
English	2,902	3,006	717	471
Finnish	238	453	25	37
French	1,114	2,581	216	136
German	1,176	1,162	64	60
Greek	989	4,194	558	107
Hebrew	585	1,036	19	11
Irish	2,075	1,472	194	81
Italian (north)	1,087	390	417	293
Italian (south)	5,480	4,554	2,165	655
Japanese	882	893	80	49
Korean	7	21	1	2
Lithuanian	23	49	13	....
Magyar	33	59	19	32
Mexican	686	1,504	16	43
Pacific Islander	....	....	....	....
Polish	167	305	108	16
Portuguese	799	1,187	121	91
Roumanian	50	126	19	10
Russian	160	316	856	420
Ruthenian (Russniak)	117	129	....	4
Scandinavian	2,236	2,219	191	185
Scotch	1,010	1,176	197	121
Slovak	27	44	17	6
Spanish	469	1,038	375	130
Spanish American	157	169	39	23
Syrian	45	70	13	7
Turkish	7	20	2	4
Welsh	76	79	24	10
West Indian (except Cuban)	60	94	41	59
Other peoples	280	655	76	63
Not specified	....	....	751	581
Total	24,532	30,560	8,331	4,082
Per cent increase 1916	....	24.7	....	[1] 51.0

[1] Decrease.

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. Rules, procedure, form, workmen's compensation, insurance, and safety act. (Effective January 1, 1916.) [Sacramento], 1916. 40 pp.*

This pamphlet contains the rules of practice and procedure of the industrial accident commission, an itemized statement of facts to be established at the hearings before the commission in connection with any case and other information relating to the termination and settlement of claims under the act. The printed forms include the employers' written acceptance, notice of claim for compensation, application for adjustment of claims, the release, and final receipt.

—— —— *Tentative elevator orders, prepared by a subcommittee representing various interests, relating to the manufacture, use, and inspection of elevators, at the request of the industrial accident commission of the State of California for the criticisms or suggestions of employers, employees, and others interested. [Sacramento], 1916. 37 [1] pp.*

As stated, these orders are tentative, and announcement is made of the fact that public hearings will be held at San Francisco and Los Angeles on April 27 and May 11, 1916, respectively. The final determination as regards these orders is not yet known.

ILLINOIS.—*State Board of Arbitration. Report, March 1, 1916. [Springfield, 1916.] 112 pp.*

This volume gives the history of various labor disputes occurring in the State during 1915, and of the proceedings in those disputes in which the board was called upon to institute arbitration processes; also the results of such interventions, together with resulting agreements entered into. No statistical or text summary is presented. The Federal and the Illinois arbitration laws are reproduced.

LOUISIANA.—*Bureau of Agriculture and Immigration. Seventeenth biennial report of the commissioner of agriculture and immigration for the years 1914 and 1915. Baton Rouge, 1916. 92 pp.*

This is not strictly a combined biennial report but two separate annual reports contained within one cover. The data relate mainly to agricultural conditions and production in Louisiana.

—— *Bureau of Labor and Industrial Statistics. Report of the commissioner of labor and industrial statistics. New Orleans, 1916. 30 pp.*

In submitting this, my biennial report for the department of labor and industrial statistics, I beg to present at the outset a series of nine recommendations which my investigations of labor conditions in this State have suggested for the betterment of the masses of our working people:

1. Amending of the workingmen's compensation insurance act, so that the insured will receive a benefit the first week, instead of the third week, as now provided; the average workman, if injured, needs aid immediately and not three weeks hence.
2. Further legislation to prevent the payment of wages in coupon books which are only redeemable at the company's commissary; this is an evil which is working great hardship on a large army of industrial workers.
3. An act to prohibit the payment of wages in barrooms, as is frequently the case now, the checks given being redeemable over the bar and the holder being expected to purchase drinks to secure their cashing.
4. An eight-hour shift for the New Orleans police force.

5. Amending of Act 271 of 1908 so as to require "skilled and unskilled labor," as well as mechanics employed on all State or public buildings or public work in cities or parishes of the State of Louisiana, to be citizens of the State and to have one paid poll tax.

6. An act to prevent factories and corporations retaining a portion of the salary for one year in order to insure that the employed will become skilled. This is a form of "peonage" and is being practiced in the city of New Orelans, without there being any law to prevent it. This department undertook the prosecution of such cases, but found no statute by which the practice could be stopped and punished.

7. Better labor regulations for steam laundries, particularly as to the women and girls employed.

8. State enactment for the improvement of sanitary conditions in many of the lumber camps, which I found deplorable.

9. An act requiring that every accident in the State must be reported to the department of labor and industrial statistics by the corporation, association, mill, factory, workshop, railroad, etc., by which the injured is employed.

From September 1, 1914, to April 30, 1916, this office has received and handled over 4,000 complaints of one kind or another, and as a direct result of our investigations and efforts this department has brought about the adjustment and payment of $23,785.60 in wages and claims, without cost to the labor which had earned this vast sum.

——— ———,
Commissioner.

Maryland.—*Bureau of Immigration. Report, November 1, 1915. Baltimore, 1916. 30 pp.*

The tenth biennial report of the Maryland Bureau of Immigration for the two years ending October 31, 1915. The work of the bureau consists very largely in attempting to settle immigrants upon Maryland farms.

Massachusetts.—*Joint Board, State Board of Labor and Industries, and Industrial Accident Board. General safety rules and regulations (tentative draft). [Boston, 1916?] 9 pp.*

As stated, this is a tentative draft of general safety rules for the construction of machine guards, and safeguards for ladders, stairs, railings, platforms, passageways, etc. Before the final adoption of the rules, hearings were held before the joint board January 4, 1916.

—— *State Board of Labor and Industries. A new method of gathering statistics. Report of subcommittee of the relief agencies' committee of the Massachusetts State committee on unemployment. April, 1916. Boston, 1916. 13 pp.*

This pamphlet is published by the State Board of Labor and Industries of Massachusetts and distributed under its authority for the Massachusetts committee on unemployment, connected with the American section of the International Association on unemployment. It will be reviewed in a future number of the Review.

—— *Teachers' Retirement Board. Second annual report of the Teachers' Retirement Board for the year ending December 31, 1915. Boston, 1916. 22 pp.*

On December 31, 1915, 8,612 teachers in Massachusetts were members of the retirement association. Sixty-six members were retired during the year; 8 at the age of 60, 11 at the age of 61, 21 between the ages of 62 and 65, 11 between the ages of 66 and 69, and 15 teachers were retired who had attained 70 years, the age of compulsory retirement.

On December 31, 1915, there were 186 members on the retired list and the amount of retiring allowances in force was $70,719.92.

New York.—*Bureau of Statistics and Information. Industrial accident prevention, prepared by the Bureau of Statistics and Information. [Albany, 1916.] 54 pp. (Department of Labor. Special bulletin, issued under the direction of the Industrial Commission, No. 77.)*

This bulletin, consisting of two parts—experience in accident prevention, and a discussion of the means by which results have been obtained—will be found summarized on pages 107 to 113 of this number of the Review.

New York.—*Department of Foods and Markets. Second annual report of the Department of Foods and Markets for the year ending December 31, 1915. Albany, 1916. 33 pp.*

Among the work accomplished by this department during the year 1915 the report notes the following: Forcing of the large bakeries to restore the 5-cent price for a loaf of bread after they had increased it to 6 cents; and the reduction in the retail price of cold-storage eggs which are frequently sold in October and November as strictly fresh eggs at from 45 to 60 cents a dozen. The issue of a regulation by the department requiring jobbers and retailers to place signs on cold-storage eggs and to display the cost price led to their sale at from 30 to 35 cents a dozen.

Wisconsin (Milwaukee).—*Citizens' Committee on Unemployment. Fourth annual report of the citizens' committee on unemployment and the public employment bureau of Milwaukee to the common council, city of Milwaukee, board of supervisors, county of Milwaukee, and the Industrial Commission of Wisconsin, year ending October 31, 1915. [Milwaukee, 1915.] 9 pp.*

The report states that last year was the busiest in the history of the employment office. It placed over 3,000 more applicants in positions than in the year 1913, which was a prosperous year. During 1915 it secured 18,911 positions out of a total of 26,090 persons referred to positions. The number of applicants for work during the year was 35,658. Therefore, the number placed in positions was 53 per cent of the number of applicants for work.

In 1914 applications for work numbered 33,750 and positions secured 15,080; and in 1913 corresponding numbers were 29,282 and 15,660.

United States.—*Bureau of Mines. Coal-mine fatalities in the United States, 1870–1914, with statistics of coal production, labor, and mining methods by States and calendar years. Compiled by Albert H. Fay. Washington, 1916. viii, 370 pp. (Bulletin 115).*

A summary of this volume will be used in connection with an article on coal-mine fatalities in the United States in a future number of the Review.

—— —— *Effects of atmospheres deficient in oxygen on small animals and on men. Washington, 1915. 12 pp. (Technical Paper 122.)*

Atmospheres that are deficient in oxygen begin to affect men when the percentage of oxygen is about as low a that affecting canaries and mice. Canaries are slightly more susceptible to "oxygen want" than are mice. In mixtures of air and nitrogen containing about 7.6 to 7.8 per cent oxygen, canaries show pronounced distress. When the oxygen content is about 7 per cent, mice show considerable distress, and a man is in grave danger of dying; hence canaries and mice should not be used by exploring parties in mines to show when men unequipped with breathing helmets should retreat, because the atmosphere is low in oxygen.

Mice and canaries, especially the latter, are chiefly of value for indicating to exploring parties the presence of dangerous proportions of carbon monoxide. In an atmosphere in which oil-fed lamps will not burn, an exploring party should not depend upon canaries for further guidance, but should use breathing apparatus in advancing into the atmosphere.

—— —— *Report of the territorial mine inspector of the Government of Alaska for the year 1915. [Juneau, Alaska, 1916.] 35 pp.*

Contains a statement of the value of the production of different forms of ore mined in Alaska and of the activities of the mine inspector. Inspections for the year 1915 included 168 placer mines, 31 quartz mines, and 30 dredges, employing altogether approximately 3,000 men. There were reported 23 fatal accidents, 92 serious ones, and 387 slight ones. The figures for serious accidents are considered very defective, due to the lack of reports. Estimating the number of men employed in and around the mines in 1915 to be 5,000, the fatal rate per thousand would be 4.6.

The inspector notes that more interest is being taken in the matter of making the mines safer for employees.

Wages are reported at about the same level as last year—$5 per day.

UNITED STATES.—*Congress. House. Committee on Labor. Commission to study social insurance and unemployment: Hearings before the Committee on Labor, House of Representatives, Sixty-fourth Congress, first session, on H. J. Res. 159, a resolution for the appointment of a commission to prepare and recommend a plan for the establishment of a national insurance fund and for the mitigation of the evil of unemployment. April 6 and 11, 1916. Washington, 1916. 306 pp.*

Those who submitted testimony to the committee were the following: Dr. John B. Andrews, Joseph P. Chamberlain, James L. Cowles, Miles M. Dawson, Samuel Gompers, Dr. Royal Meeker, Charles F. Nesbit, Rufus M. Potts, Miss Juliet Stuart Poyntz, Dr. I. M. Rubinow, Dr. N. I. Stone, and James W. Sullivan.

Five appendices were submitted in connection with these hearings, containing extracts from the preliminary report to the Social Insurance Committee of the National Convention of Insurance Commissioners by Mr. Rufus M. Potts, insurance superintendent, State of Illinois, chairman; Recent trend of real wages; Unemployed insurance, British act; Unemployment insurance, present status; Social benefits provided by trade-unions; Immigration, speech by Hon. Meyer London.

——— ——— ——— ——— *Convict labor bill: Hearing before the Committee on Labor, House of Representatives, Sixty-fourth Congress, first session, on H. R. 6871, a bill to limit the effect of the regulation of interstate commerce between the States in goods, wares, and merchandise wholly or in part manufactured, mined, or produced by convict labor, or in any prison or reformatory. Washington, 1916. 24 pp.*

——— ——— ——— ——— *Method of directing the work of Government employees: Hearings before the Committee on Labor, House of Representatives, Sixty-fourth Congress, first session, on H. R. 8665, a bill to regulate the method of directing the work of Government employees. March 30–31, April 1 and 4, 1916. Washington, 1916. 368 pp.*

This volume contains the hearings on the so-called Tavenner bill punishing the use of a stop watch in connection with making or establishing a standard time in which work must be done for the purpose of fixing premiums and bonuses in Government workshops and arsenals. It contains an extended discussion of scientific management in its relation to the employment of labor.

——— ——— ——— ——— *Minimum wage bill * * * Report to accompany H. R. 11876. [Washington, 1916.] 17 pp. (64th Cong., 1st sess., House of Representatives, Report 742.)*

As a part of this report by Mr. Nolan from the Committee on Labor, accompanying the bill providing for a minimum wage for Federal employees, there is a statement of the estimated minimum cost of living during a year for a family of five, a statement of the average retail prices of certain specified articles of food in Washington, D. C., in each year from 1890 to 1915, and a statement of the purchasing power of a dollar in each of the years 1890 to 1915 in terms of various commodities.

The bill under consideration proposes to establish a minimum wage of $3 a day for all Government employees.

——— ——— ——— ——— *Products of convict labor in interstate commerce. Report (to accompany H. R. 6871). [Washington, 1916.] 5 pp. (64th Cong., 1st sess., House of Representatives, Report 75.)*

The bill here under consideration aims to remove the impediment to the effective operation of the local laws of the several States upon the subject of the sale within their borders of convict-made goods, an impediment imposed by the construction of the interstate commerce clause, so long as Congress does not legislate on the subject.

It provides that convict-made goods shall be subject to the laws of any State in the same manner as other goods are; and that they shall not be exempt from such laws by reason of being introduced in the original package or otherwise; it is proposed to permit the States to prohibit the sale of convict-made goods within their limits, if they so desire.

UNITED STATES.—*Congress. House. Committee on Reform in the Civil Service. Retirement of employees in the Federal classified service: Hearings before the Committee on Reform in the Civil Service, House of Representatives, Sixty-fourth Congress, first session. April 28, 1916. Washington, 1916. 171 pp.*

This volume constitutes the hearings on the so-called Tavenner bill (H. R. 14302) to provide for the retirement of employees in the classified civil service of the United States and the establishment of a civil superannuation and disability pension system. Among other information submitted by different individuals who appeared before the committee there is found a statement of the principal features of the pension plans of large corporations and business concerns; a list of such corporations and business concerns known to have old-age pension schemes in operation; a list of countries having some form or other of civil-service retirement legislation; a tabular statement of the principal features of civil-service retirement legislation in Argentina, Australia, New Zealand, Canada, Great Britain, Austria, Belgium, France, and the German Empire, together with four of its federated States; a tabular statement of the pension or retirement systems of certain industrial corporations in the United States; extracts from the annual reports of the Secretary of War for the years 1904 to 1906 and 1908 to 1911, and 1913, on the subject of civil-service retirement; statement by Mr. George L. Cain, president of the National League of Government Employees, submitting data collected and compiled by that league relative to the Saturday half-holiday throughout the country.

—— —— —— *Committee on the District of Columbia. Authorizing and directing the Department of Labor to make an inquiry into the cost of living in the District of Columbia: Hearings before the Committee on the District of Columbia, House of Representatives, Sixty-fourth Congress, first session, on H. J. Res. 91, a resolution authorizing and directing the Department of Labor to make an inquiry into the cost of living in the District of Columbia, and to report thereon to Congress as early as practicable. Washington, 1916. 29 pp.*

—— —— —— *Inquiry into the cost of living in the District of Columbia. Report to accompany H. J. Res. 91. [Washington, 1916.] 4 pp. (64th Cong., 1st sess., House of Representatives, Report 310.)*

The joint resolution in question proposed the expenditure of $6,000 for an inquiry into the cost of living in the District of Columbia to be undertaken by the Department of Labor. At the hearings there was discussed the practical use of such an inquiry in the event of the probable establishment of a minimum wage for the District as well as the purely economic or theoretical value in ascertaining information as to expenditures in American workingmen's families.

—— *Department of Labor. Division of Publications and Supplies. Publications of the Department of Labor available for distribution. May 15, 1916. Washington, 1916. 11 pp.*

FOREIGN COUNTRIES.

ARGENTINA.—*Departamento Nacional del Trabajo. División de Estadística. Anuario estadístico del trabajo. Año, 1914. Buenos Aires, 1916. 516 pp., 12 charts.*

Yearbook containing labor statistics for the fiscal year 1914, with comparative data for the five semiannual periods, February, 1912, to January, 1915.

AUSTRALIA.—*Court of Conciliation and Arbitration. A report of cases decided and awards made in the Commonwealth Court of conciliation and arbitration, including conferences convened by the president, during the year 1914. Melbourne [1916], xxvi, 510 pp. (Commonwealth Arbitration Reports, vol. 8.)*

Contains a report of cases decided by the court during 1914 under the arbitration and conciliation act, 1904–1911. Among the cases decided is that of the Australian Telegraph and Telephone Construction and Maintenance Union against the public service commissioner and the postmaster general involving the establishment of a minimum wage for telegraph and telephone linemen. It was urged by the Government that the cost of living, as stated by the Commonwealth statistician, refers only to food and rent, and that the great increase in the cost of living during recent years does not apply to all the expenditures of an employee. It was contended that the claimant union had not shown the extent to which clothes had risen in price; but the Government admitted that there had been some increase. The court held that the burden lay on the Government, as represented by the public service commissioner and the postmaster general, to show "that the same force as depreciates the value of gold against food and rent does not depreciate its value as against clothes and other commodities also" (p. 130).

In this same case it was also urged that the court should not apply to public employment its principle of looking for a basic wage in the cost of living primarily, because the cost of living may go down and there will then be a practical difficulty of a political nature in reducing the rates of wages established at a time of high cost of living. The court pointed out in reply that there would be little consolation to the public employee to say that if he gets too little for necessaries this year his successor will get more than sufficient in 20 or 30 years. The court declined to accept the two assumptions involved in the argument, namely, that Government employees will fail to perceive that if wages are raised for them at a time of abnormal increase in the cost of living, wages may be lowered upon a fall in price, and that Parliament would refuse to do its duty when the occasion arose.

In the case of the Federated Tanners and Leather Dressers Employees' Union of Australia against Alderson & Co. and others, the question of the capacity of any industry to pay wages arose. It was held in conformity with preceding cases that a living wage can and should always be allowed, but that the court must consider such a defense, if it is raised, as to allowances beyond a living wage.

AUSTRIA.—*Ministerium fur öffentliche Arbeiten. Die Bergwerks-Inspektion in Österreich. I. Teil. Berichte der Berghauptmannschaften und Revierbergämter. Vol. 20, 1911; Vol. 21, 1912. Vienna, 1914, 1915. 2 vols.*

These two volumes contain the reports of the Austrian mine inspection service for the years 1911 and 1912. Each volume is made up of the reports of the individual superior mine offices (*Berghauptmannschaften*) and of the district mine offices (*Revierbergämter*) under the jurisdiction of each superior mine office. These individual reports give (1) general statistics as to number of establishments and workmen subject to the mine office in question, (2) an account of measures for accident prevention, (3) accident statistics, and (4) data as to working conditions. There is no general summary.

—— —— *Statistik des Bergbaues in Österreich für das Jahr 1913. Vol. 1: Die Bergwerksproduktion. Vienna, 1914. 231 pp.*

Volume 1 of the annual statistics of the Austrian mining industry, published by the ministry of public works, gives data for the year 1913.

EGYPT.—*Statistical Department. Annuaire Statistique de l'Egypte, 1915. 7me Année. Cairo, 1916. xxxiii, 388 pp.*

This is a general statistical yearbook for Egypt. The only data of interest to labor contained therein are those relating to wholesale and retail prices (monthly averages).

GREAT BRITAIN.—*Board of Trade. Railway accidents; reports to the Board of Trade of inspecting officers of the railway department of inquiries into certain accidents which occurred during the three months ending 31st December, 1915. London, 1916. 13 pp.*

Contains a descriptive account of five railway accidents occurring during the period indicated.

—— *Home Department. Shops Committee. Reports of the committee appointed by the secretary of state for the Home Department to consider the conditions of retail trade which can best secure that the further enlistment of men or other employment in other national services may not interfere with the operations of that trade. London, 1915. 10 pp.*

This committee was organized for the purpose of devising means to secure as large an enlistment as possible of employees in stores and shops. Under the pressure of actual conditions it appeared that the vacancies left by employees enlisting were being filled generally by men over military age and by women, although in some instances vacancies were not filled at all due to a slackness in trade, or because, in some instances, the employing personnel was in excess of the actual needs.

The work was carried on by the committee through circular letters directed to employers and through public meetings of representative associations of employers in the retail and wholesale trades. The committee obtained replies from 85,591 employers who reported 123,739 men of military age in their employ of which number, they stated, 33,809 could be released. The information thus obtained in regard to the men of military age in employment was communicated by the labor exchanges to the recruiting authorities.

To further encourage enlistment, the committee secured from over 50 per cent of the employers concerned a definite promise to reinstate enlisted men.

Realizing that disorganization to some extent must occur in the selling trades as a result of considerable enlistment among the men, the committee nevertheless felt that great reliance could be placed upon female labor; "the scope of female labor is increasing daily; and there are many instances in the distributing trades as in other trades where women have been introduced into new kinds of work and are acquitting themselves creditably, in many cases altogether beyond expectation." The committee notes the successful employment of women in the work of delivery from motor trucks.

The London County Council has established a practical training course for women in grocery salesmanship.

It has also attempted to relieve the situation by organizing joint delivery among different firms, but this is a matter which only the trades themselves can settle properly. An appeal is also being made to the general public to exercise some consideration in their shopping so as to relieve the situation. Early closing of shops is also being advocated and should be met generally by voluntary agreement among the firms themselves acting in cooperation with the local authorities.

GREAT BRITAIN (LIVERPOOL).—*Enquiry and Employment Bureau for Educated Women. Eighteenth annual report, 1915. Liverpool [1916]. 2 leaves.*

This bureau aims to collect and file information with regard to the training and employment of women; to induce the unprepared to train; to assist training financially by means of a loan training fund which has been established; to act as a connecting link between employers and those seeking work; and to endeavor to adjust the demand and supply of labor.

During the year 662 employers made use of the bureau, 1,390 persons sought work through it, and 1,135 made use of the bureau through inquiries for information. Among 343 persons placed in situations during the year 68 were clerks and secretaries, the highest single portion of all occupations.

INDIA.—*Department of Statistics. Wholesale and retail (fortnightly) prices: Returns showing the wholesale and retail prices of cereals, pulses, oilseeds, sugar (raw), salt, etc., in India by districts for the fortnight ending March 31, 1916. Calcutta, 1916. 21 pp.*

ITALY.—*Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Previdenza. Provvedimenti in materia di economia e di finanza emanati in Italia in seguito all guerra Europea. Part II: August 1 to December 31, 1915. Rome, 1916. 620 pp. (Annali del Credito e della Previdenza. Series II, vol. 10.)*

The present volume gives the text of all economic measures—laws, decrees, ordinances, circular orders, etc.—enacted in Italy between August 1 and December 31, 1915, and is a continuation of a previously issued volume giving the measures enacted between August 1, 1914, and July 31, 1915.

—— *Direzione Generale della Statistica e del Lavoro. Annuario Statistico Italiano, anno 1914. Rome, 1915. x, 502 pp.*

A statistical yearbook for the year 1914, grouped in 24 chapters, giving the same data as in previous issues of this publication. Of interest to labor the volume contains statistical data as to employers' and workmen's organizations, periodical, migrations of workmen within Italy, repatriation of workmen on account of the war, wages and hours of labor in selected industries, convict labor, strikes, and data from the industrial courts.

NORWAY.—*Statistiske Centralbyraa. Fabriktællingen i Norge, 1909, fjerde hefte: Produktionsstatistik. Christiania, 1915. [447] pp. (Norges officielle statistik, VI, 50.)*

This volume constitutes the fourth volume of the census of manufactures of Norway for 1909. Volume 1 comprised an enumeration of establishments, wage earners, and proprietors; volume 2 was a statistical presentation of wages; volume 3 dealt with hours of labor, while the present volume contains statistics of production.

The census reported 3,831 establishments in the country in 1909 [the exact day of the census does not appear]. These establishments employed 106,574 workmen. The total value of the product, exclusive of raw material consumed in the process of manufacture and partly manufactured material, was 246,349,556 crowns ($66,021,681).

ONTARIO.—*Workmen's Compensation Board. Report for 1915 of the Workmen's Compensation Board, Ontario, including also report for 1914 covering organization. Toronto, 1916. 46 pp.*

This report covers the calendar year 1915, the first year of actual operation under the compensation act. The act has worked smoothly and satisfactorily, the report states.

There were collected during the year in premiums, based upon the employers' estimates of pay roll made the previous year, and to be adjusted according to the actual pay roll as subsequently ascertained, the amount of $1,539,493; interest, penalties, etc., brought the total receipts to $1,581,248.

The actual amount of compensation paid other than sums paid for continuing pensions amounted to $323,242.29, and administration expenses equaled $77,436.27. These and other items of expense were as follows:

Compensation paid, other than pensions	$323, 242. 29
Transferred for pensions awarded	349, 939. 33
Special advances of compensation	1, 685. 00
Special medical treatment	250. 30
Paid to safety associations	24, 820. 81
Administration expenses	77, 436. 27
Deferred payments of compensation other than pensions	17, 272. 17
Compensation estimated for pending claims and unreported accidents	208, 041. 80
Held as disaster reserve	15, 910. 01
Compensation estimated for claims partially dealt with	167, 623. 64
Total	1, 186, 221. 62

The total number of accidents compensated during the year was 9,829, of which number 8,544 resulted in temporary disability, 1,034 in permanent disability, and 251 in death.

QUEENSLAND.—*Chief inspector of machinery and scaffolding. Annual report of the chief inspector of machinery and chairman of the board of examiners (the inspection of machinery and scaffolding acts, 1908-1912), for the year ending 30th June, 1915. [Brisbane, 1915.] 9 pp.*

Contains a report of the inspector for the year ending June 30, 1915, under the inspection of machinery (including boilers) and scaffolding acts, 1908-1912.

SWITZERLAND (BASEL-STADT—CANTON).—*Oeffentliches Arbeitsnachweisbureau. 25.—[26.] Bericht und Rechnung über das Oeffentliche Arbeitsnachweisbureau (mit Dienstbotenheim) des Kantons Basel-Stadt und Statistik der Vermittlungstätigkeit im, [1915. Basel, 1915-1916.] 2 vols.*

These two volumes comprise the twenty-fifth and twenty-sixth annual statements of the public employment bureau of the canton of Basel-Stadt. They contain reports not only of the public employment bureau but also of private agencies which are required to make periodical reports.

The number of places filled in 1915 by the public employment bureau, by bureaus not conducted for profit, and by commercial agencies was 16,539 out of a total of 29,407 applicants for work; in 1914 these offices filled 17,658 positions, for which there were 44,809 applicants.

OFFICIAL PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

AUSTRALIA.—*Commonwealth Bureau of Census and Statistics. Labor and Industrial Branch. Labor Bulletin (published quarterly). Melbourne.*

October-December, 1915.—Industrial conditions, fourth quarter, 1915; Unemployment, fourth quarter, 1915; Retail prices, house rents, and cost of living, 1915; Investigation into cost of living in 150 towns in Australia, November, 1915; Wholesale prices, 1915; Strikes and lockouts, 1915; Changes in rates of wages, 1915; Current rates of wages, 1915; Operations under arbitration and wages board acts, 1915; Assisted immigrants, 1915; Report of State free employment bureaus, 1915; Industrial accidents, 1915; Proceedings under the Commonwealth conciliation and arbitration acts, third and fourth quarters, 1915; Reports of labor departments and other labor bureaus and societies in Australia; Imperial and foreign publications received.

CANADA.—*The Labor Gazette issued by the Department of Labor by order of Parliament. Ottawa.*

May, 1916.—Notes on current matters of industrial interest; Industrial and labor conditions, April, 1916; Reports of local correspondents; Proceedings under the industrial disputes investigation act, 1907, during April, 1916, and for the year ending March 31, 1916, with summary for the nine years 1907-1916; Trade disputes, April, 1916; Tabular statement showing state of the labor market during April, 1916; Reports from employment bureaus; Employment in the building trades; Immigration, emigration, and colonization in Canada, first quarter, 1916; Prices (wholesale and retail) in Canada during April, 1916; Prices in Great Britain, United States, Australia, and New Zealand; Fair wages schedules in Government contracts, April, 1916; Changes in rates of wages and hours of labor, first quarter, 1916; Industrial accidents, April, 1916; Distribution of labor in Canada, April, 1916; Report on conditions of woman and child wage earners in the United States; Publications reviewed; Recent legal decisions affecting labor.

DENMARK.—*Statistiske Efterretninger udgivet af det Statistiske Departement. Copenhagen.*

May 1, 1916 (vol. 8, No. 7).—Unemployment, 1915; Population of Denmark, February 1, 1916; Births, marriages, and deaths, 1915; Deaths by accident and suicide in Denmark, 1915; Index number of the Economist.

FRANCE.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris.*

January-February, 1916 (vol. 23, Nos. 1, 2).—Volume of employment in industrial and commercial establishments, January, 1916; Strikes, January and February, 1916; Coal-mine labor, December, 1915, January, 1916; Reports from the mixed departmental commissions on unemployment, etc.; Reports from the public employment bureaus; Subsidies to workmen's cooperative societies and credit unions; Aliens in Paris, March 5, 1911; Minimum wage rates established under the law of July 10, 1915, relating to minimum wages in the clothing industry; The economic situation expressed in index numbers, fourth quarter, 1915; Retail prices and cost of living in cities of over 10,000 inhabitants; Reports from foreign countries, including Germany, Austria, Great Britain, and the Netherlands, relating to the labor market and the cost of living; Reports from the councils of conciliation, fourth quarter, 1915; Foreign commerce of France, January, February, 1916; Wholesale prices at Paris, January-February, 1916; Revenues of railroads, August 15, 1914, to December 31, 1915; Laws and decisions of courts relating to labor, etc.

GREAT BRITAIN.—*The Board of Trade Labor Gazette. London.*

May, 1916.—Employment chart; The labor market; Special articles: Employment in Germany; The war and employment in France; Retail food prices (United Kingdom, Berlin, Vienna, Switzerland); Rise in the cost of living in Christiania. Reports on employment in the principal industries; Labor in the British Dominions over-sea and in foreign countries: Canada; Queensland; New Zealand; Austria-Hungary; Holland; United States. Board of trade labor exchanges; Statistical tables: Prices of wheat, flour, and bread; Trade disputes; Changes in rates of wages; Diseases of occupations; Fatal industrial accidents; Pauperism; Unemployment insurance; Foreign trade. Legal cases, official notices, etc.; Recent conciliation and arbitration cases; Statutory rules and orders under the munitions of war (amendment) acts, 1916; Trade boards act, 1909; National insurance acts, 1911–1915; Publications relating to labor received during April.

ITALY.—*Bollettino dell Ufficio del Lavoro. Ministero di Agricoltura, Industria e Commercio. Rome.* (*Monthly.*)

January-February, 1916.—Activities in 1915 of the employment bureau of the Società Umanitaria in Milan; Labor disputes in Italy, fourth quarter, 1915; Labor disputes in Sweden, 1914; Statistics of employment on public works, third quarter, 1915; Retail prices of foodstuffs and other articles of general consumption sold by cooperative stores, November and December, 1915; Cases of industrial poisoning in the chemical industry reported by factory inspectors in Germany, Austria, England, and Switzerland; Hygiene of establishments for the preparation of tripe and casings, and for the extraction of fats from animal refuse; Cost of insurance against industrial diseases in England and in the State of New York; Sanitary investigations of the American Museum of Safety (results of an investigation among cooks and waiters in New York); Work of the chambers of commerce in improving conditions of employment, etc., of salaried employees; Italian section of the International Association on Unemployment (model forms of by-laws and regulations for a public employment office); Collective agreements in Sweden, 1914; Work of the industrial courts, first half, 1915; Court decisions affecting labor.

——— ——— ——— ——— (*Semimonthly*).

May 1, 1916.—Labor market, by localities and industries; Labor disputes, March and first half of April, 1916; Retail prices and index numbers of foodstuffs in Italian cities, first six months, 1914, and March, 1916; Retail prices of foodstuffs in foreign countries—Great Britain (increase in April, 1916, over July, 1914). Germany (increase in February, 1916, over July, 1914); Employers' and employees' association; Congresses and conventions; Parliamentary review; Activities of the labor office; Decree, April 6, 1916, authorizing extraordinary appropriations during the war for the relief of unemployment, and for compensation to Italian subjects injured by industrial accidents in foreign countries whose accident pensions have been suspended during the war.

NETHERLANDS.—*Manndschrft van het Centraal Bureau voor de Statistiek. The Hague.*

March, 1916.—Review of the labor market (building trades, clothing, cleaning and laundries, and coal mining), February, 1916; Fisheries and dock labor, March, 1916; Conditions among interned soldiers; The building trades in 1914 and 1915; Unemployment and unemployment insurance, February, 1916; Reports from the labor exchange, February, 1916; Strikes and lockouts, February, 1916; Labor conditions in public works; Collective agreements, etc.; Trade-union reports, number organized, disbanded, etc.; Prices (wholesale and retail), March, 1916; Passports issued, February, 1916; Court decisions affecting labor; Miscellaneous reports of social and economic import; War measures in foreign countries; Industrial conditions in foreign countries (the labor market, employment bureaus, strikes and lockouts, prices, etc.);

Statistical tables on the labor market, employment bureaus, factory inspection, housing and building inspection, occupational diseases, and State finances; Laws, regulations, and ministerial orders.

April, 1916.—Review of the labor market, first quarter, 1916; Employment of fishermen, dock workers, and interned soldiers, March, 1916; Unemployment and unemployment insurance, March, 1916; Reports from employment exchanges, March, 1916; Strikes and lockouts, March, 1916; Labor conditions on public works, March, 1916; Collective agreements, etc.; Trade-union reports, number organized, disbanded, etc.; Prices (wholesale and retail), April, 1916; Passports issued, March, 1916; Court decisions affecting labor; Miscellaneous reports of social and economic import; Reports of savings banks in foreign countries; War measures in foreign countries; Industrial conditions in foreign countries (the labor market, employment bureaus, strikes and lockouts, prices, emigration, etc.); Statistical tables on the labor market, employment bureaus, factory inspection, housing and building inspection, occupational diseases, and State finances; Laws, regulations, and ministerial orders, etc.

NEW YORK.—*The Bulletin Issued Monthly by the New York State Industrial Commission. Albany.*

May, 1916 (*vol. 1, No. 8*).—Accident prevention; Amendments to the workmen's compensation act; Report of the Bureau of Industries and Immigration; A story without words (pictures of fire destruction and the use of fire-resisting material); Decisions of the Legal Bureau in compensation cases; Decisions of court of appeals in compensation cases; Summary of first annual report of the State industrial commission; Work of the Bureau of Mediation and Arbitration; Rulings of the commission under the industrial code; The labor market in April; Reports from the Bureau of Inspection.

QUEENSLAND.—*The Queensland Industrial Gazette, issued by the Department of Labor. Brisbane.*

March 11, 1916 (*vol. 1, No. 1*).—Introductory matter; Facsimile registration and application cards; Recent legal decisions, from January 1, 1916; Reported factory accidents; Placement of labor; Workers placed in employment; Industrial awards; agreements, etc., and the divisions of the State in which they operate; Helping returned soldiers; Detailed statement of operations, etc., of the female labor exchange; Wages and working hours; Summary of operations of State labor exchange; Supply and demand for labor as shown by exchanges for week ended February 21, 1916; Licenses to work for less rates of wages than fixed by an award; Arrears of wages secured by department since January 1, 1916; List of unions registered under "The trades-union act"; New awards for February; Trade agreements (holidays, etc.); Shearing dates for March.

April 10, 1916 (*vol. 1, No. 2*).—Introductory; Industrial awards for January; Answers to correspondents; The problem of unemployment; Return showing trans actions of labor exchanges during February, 1916; Excess supply of and demand for labor—totals for February, 1916; Excess supply of and unsatisfied demand for labor, weekly statements for March, 1916; Operations of female labor exchange; The agricultural bank of Queensland; Professional costs may be saved; Important legal decision; Recent legal decisions; Provision for fair wages in Canadian Government contracts; Employment, wages, prices, etc., in United Kingdom, 1915; Operations of Queensland war council (employment subcommittee); Reviews of awards, etc.; Extract for industrial peace act; Lists of licenses to aged and infirm workers and improvers; Norway's first law for official mediation in labor disputes; Inspectors' reports upon accidents; Accidents reported to the chief inspector of machinery; Arrears of wages secured by department; Need for care in the wording of industrial awards; Awards for March; Prices fixed by control of trade board; Advertising State labor exchanges; Trade agreements; Half-holiday poll at Esk; Acts passed, bills declared lost, etc., during 1915 session of Parliament; List of matters dealt with by

Commonwealth conciliation and arbitration court; The labor exchanges act of 1915; Regulations under labor exchanges act; Awards for January; Shearing dates, April to August, 1916; List of publications received by the department.

SPAIN.—*Boletin del Instituto de Reformas Sociales.* (*Publicacion Mensual.*) *Madrid.*

April, 1916 (*No. 142*).—Administrative reports of the secretary's office and the technical divisions; Reports of the factory inspectors on the effect of the European war on Spanish industry in 1915; Strikes in 1914 and first quarter 1916; Cost of living; Conventions and congresses; Labor welfare; Laws, decrees, etc., affecting labor; War measures in Austria; Strikes and lockouts in Great Britain, January, 1915.

MISCELLANEOUS.

ARIZONA.—*State Bureau of Mines. State Safety Bulletin, prepared by the University of Arizona. Tucson, Arizona.*

January, 1916 (*Bulletin No. 9, Safety Series No. 1*).—Finances of the bulletin; Best way to prevent accidents; Progress of the Calumet & Arizona Mining Company; Safety organization of the Copper Queen Consolidated Mining Co.; The busy safety inspector; New Zealand Mining Journal on safety; First-aid and rescue contest; Men in charge of mine safety in Arizona; Safety maxims, etc.

February, 1916 (*Bulletin No. 13, Safety Series No. 2*).—Preventable accidents; Cultivating the safety-first idea; Welfare of the Calumet & Hecla Co.; The unclinched nail; The Southwestern Mining Safety Association; First-aid work at the Old Dominion Mine; Mine rescue and first-aid work at the University of Arizona; Safety work on the Rand (South African Mining Review); Safety in using explosives.

AUSTRIA.—*Amtliche Nachrichten des k. k. Ministeriums des Innern, betreffend die Unfall— und Krankenversicherung der Arbeiter. Vienna.*

April, 1916.—General part: Imperial decree, February 29, 1916, providing for continuance during the war of all contracts subject to the mercantile employee's act. Accident insurance: Changes in the personnel of the workmen's accident insurance institutes and the courts of arbitration; Decisions of the administrative court relating to workmen's accident insurance; Decision of May 7, 1915, as to subsequent payment of accident insurance premiums; Decisions of the courts of arbitration of workmen's accident insurance institutes. Sickness insurance: Changes in the plan of organization of district sick funds; Decree of the ministry of the interior of March 28, 1916, relating to the submission of annual reports by the sick funds for 1915. Decisions of the administrative court relating to sickness insurance.

ITALY.—*Bollettino della Emigrazione. Commissariato della Emigrazione. Rome.* (*Monthly.*)

March, 1916.—Repatriation of Italian war refugees coming from Switzerland; Aid to Italian war refugees; Discussion of the Burnett bill and other bills on immigration; Inspection of second-cabin passengers arriving in New York; State insurance against old age and invalidity in Canton Glarus; Compensation to survivors of Italian victims in the mine disaster in Dawson, N. Mex.; Mining centers and Italian settlements in the State of Arizona; Lack of employment for seamen in Christiania; Emigration statistics, February, 1916; Steamship companies licensed to transport emigrants; Decree, March 16, 1916, suspending the issuance of passports to male persons between 16 and 17 years of age; Budget for the Emigration Fund for the fiscal year 1916–17.

April, 1916.—Labor market in Italy with special reference to agricultural labor; Discussions in the House of Deputies, April, 1916, relating to emigration and labor; Monthly statistics of transoceanic emigration, March, 1916; Current news relating to emigration and labor in foreign countries; Maximum rates of transportation for emigrants, May 1 to August 31, 1916; Current publications relating to emigration and labor.

RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

Amalgamated Association of Iron, Steel, and Tin Workers. Journal of proceedings of the national lodge, held in Louisville, Ky., 1915. pp. 10843–11328.

—— Western scales of prices governing wages in rolling mills for the year ending June 30, 1916. 52 pp.

American Federation of Labor. Railway employees department, official proceedings of third biennial convention, April 10–21, 1916, Kansas City, Mo. 202 pp.

—— Colorado branch. 1916 official yearbook, State labor directory and 1915 convention proceedings. [1915] 128 pp.

American Iron and Steel Institute. Directory of the iron and steel workers of the United States and Canada. Eighteenth edition corrected to January 1, 1916. New York, 1916. 437 pp.

American Museum of Safety. Harriman fund for industrial betterment. First semi-annual report, June 1, 1915, to December 31, 1915 (In Safety, February, 1916).

British Steel Smelters, Mill, Iron, Tinplate Association. Annual report for 1915.

Butter Industry in the United States, by Edward Wiest. New York. Columbia University Press, 1916. 264 pp.

Casualty Acturial and Statistical Society of America. Proceedings. v. 2, pt. 2, No. 5, February 25, 1916.

Contains papers on the following subjects: Mortality from external causes among industrial policyholders of the Metropolitan Life Insurance Co., 1911–1914, by Louis I. Dublin; Analysis of the cost of 10,307 accidents arising under the New York workmen's compensation law, by Joseph H. Woodward; Statistics necessary for computing net compensation rates, by Edward Olifers; The compensation cost of occupational disease, by James D. Maddrill; Work of the statistical committee of the bureau of personal accident and health underwriters, by Benedict D. Flynn; American methods of compensating permanent partial disabilities, by I. M. Rubinow; and Cost accounting in casualty insurance, by Claude E. Scattergood.

City planning, a series of papers presenting the essential elements of a city plan. John Nolen, *ed.* New York, Appleton, 1916. 447 pp.

Cleveland Foundation. Survey committee. Publication Nos. 1 to 25.

These publications comprise the report of the Education Survey of Cleveland conducted in 1915. There are 15 monographs on the regular work of the public schools, with a larger volume summarizing the findings and recommendations relating to such work, the subjects of which are as follows: Child accounting in the public schools, by Leonard P. Ayres; Education extension, by C. A. Perry; Education through recreation, by G. E. Johnson; Financing the public schools, by Earle Clark; Health work in the public schools, by L. P. and May Ayres; Household arts and school lunches, by Boughton; Measuring the work of the public schools, by C. H. Judd; Overcrowded schools and the platoon plan, by S. O. Hartwell; School buildings and equipment, by L. P. and May Ayres; Schools and classes for exceptional children, by David Mitchell; School organization and administration, by L. P. Ayres; The public library and the public schools, by L. P. Ayres and McKinnie; the school and the immigrant, by H. A. Miller; The teaching staff, by W. A. Jessup; What the schools teach and might teach, by Franklin Bobbitt; The Cleveland school survey (summary), by L. P. Ayres.

There are eight monographs on industrial education and a summary, the subjects of which are as follows: Boys and girls in commercial work, by Bertha M. Stevens; Department store occupations, by I. P. O'Leary; Dressmaking and millinery, by Bryner; Railroad and street transportation, by R. D. Fleming; The building trades, by F. L. Shaw; The garment trades, by Bryner; The metal trades, by R. R. Lutz; The printing trades, by F. L. Shaw; and Wage earning and education (summary), by F. L. Shaw.

Conference of State and Government officials regarding the standardization of mining statistics, Washington, D. C. February 24–25, 1916. Washington, 1916. 85 pp. (Issued by the Bureau of Mines.)

Effects of physical fatigue on mental efficiency, by Floyd C. Dockeray. 1915. pp. 197–243. (Kansas university science bulletin, v. 9, No. 17. September, 1915.)

Garino-Canina, A. I prezzi delle merci in Italia nel 1914. (Reprinted from La Riforma sociale, Febbraio-Marzo, 1916.)

A report on prices of commodities in Italy in 1914.

General Electric Co., West Lynn, Mass. Apprentice system of the General Electric Co. West Lynn, [1916]. 32 pp.

History of coal mining in Illinois, including a discussion of the causes and frequency of mine and other occupational accidents and plans for their prevention, by David Ross. Springfield, 1916. 11 pp.

Immigrants' Protective League. Chicago. Seventh annual report for 1915.

Indiana, a social and economic survey, by F. D. Streightoff and F. H. Streightoff. Indianapolis, 1916. 261 pp.

In addition to other material relating to conditions in Indiana chapters are included on manufactures, transportation, labor and labor legislation, charities and correction, and education, including vocational education.

Labor party, Great Britain. Report of the annual conference of the Labor party; Bristol, January 26–28, 1916. [London, 1916] 149 pp.

Massachusetts savings bank life insurance. Miscellaneous pamphlets.

Milwaukee Citizens' Committee on Unemployment. Fourth annual report of the Citizens' Committee on Unemployment and the Public Employment Bureau of Milwaukee * * * year ending October 31, 1915. 9 pp.

Mortality from cancer throughout the world, by Frederick L. Hoffman. Newark, The Prudential Press, 1915. 826 pp.

An exhaustive compilation of statistical material relating to the prevalence of cancer. An important feature is a chapter on "Mortality from cancer in different occupations." An analysis of this work will appear in a subsequent number of the Monthly Review.

National Federation of Women Workers. Eighth annual report and balance sheet. [August, 1914, to July, 1915.] London, [1916] 46 pp.

Oliver, Sir Thomas. Occupations from the social, hygienic, and medical points of view. Cambridge University Press, 1916. 110 pp.

Treats of air pollution by street dust, smoke, and poisonous gases; ventilation of factories and work places; efficiency and fatigue; provisions for health, safety, and comfort of workers; relation of age to occupation; mortality in various occupations; dusty occupations; poisonous gases; the chemical trades; injuries caused by electricity; and occupational skin diseases.

Philadelphia Housing Commission. Fifth annual report, 1915. Philadelphia, 1915. 29 pp.

Public Education Association of the City of New York. Bulletin No. 28. (A Gary school's success in New York City. Mar. 7, 1916.)

—— Bulletin 29. ("Evaluating" the Gary plan in New York City. Apr. 20, 1916.)

Shoe industry, by Frederick J. Allen. Boston, Vocational bureau of Boston, 1916. 327 pp.

A study of the history, nature, magnitude, operations and processes, and employment opportunities and demands of the shoe industry. Contains statistical material compiled from various official sources, and a number of charts, diagrams, and illustrations; also an explanation of terms used in shoemaking.

Social survey of Fargo, N. Dak. * * * under the direction of M. C. Elmer * * * for the Associated Charities of Fargo, N. Dak. June, 1915. 46 pp.

A study of municipal problems and how to meet them. Among the subjects treated are housing conditions and sanitation, infant mortality, and the work of the free employment bureau.

Textiles, a handbook for the student and the consumer, by Mary S. Woolman and Ellen B. McGowan. New York, Macmillan, 1916. 428 pp.

A comprehensive treatise on the history and development of the textile industries, with chapters on ancient and modern processes of spinning and weaving; the woolen and worsted, cotton, and silk industries; linen and minor fibers; consumers' methods of testing textiles; microscopic and chemical study of fibers; dyeing processes and materials; hygiene of clothing; economic and social aspects of textile purchase; and clothing budgets.

Textiles; prepared in the extension division of the University of Wisconsin, by Paul H. Nystrom. New York, Appleton, 1916. 335 pp.

A study of the sources of raw material, methods of manufacture and distribution, and economic aspects of the textile industries. Contains chapters on the production and manufacture of cotton, woolen, linen, mohair, and silk textiles; dyeing and printing; cloth finishing processes; tests to determine quality; and the care and preservation of textile fabrics.

Thimme, F., und Legien, C. Die arbeiterschaft im neuen Deutschland. Leipzig, Hirzel, 1915. 232 pp.

This volume is a collection of 20 separate articles by as many different authors on the present and probable position of labor in Germany as affected by conditions arising from the war. It is edited by Friedrich Thimme, Librarian of the Prussian House of Lords, and Carl Legien, a member of the Reichstag and president of the Federation of Social Democratic Trade Unions in Germany. Contents: Hermann Oncken, Germany on the road to a united and free nation; Gustav Noske, The war and social democracy; Friedrich Meinecke, Social democracy and Machtpolitik; August Winnig, The war and the workmen's international organization; Gerhard Anschütz, The hopes for political reform of the future; Philipp Scheidemann, A new departure in domestic politics; Paul Hirsch, Municipal reorganization; Ernst Francke, Participation of the workman in the public affairs of the Empire; Carl Legien, The socialistic trade unions; Edgar Jaffé, Representation of the interests of labor in the public affairs of Germany; Hugo Heinemann, Labor legislation after the war; Waldemar Zimmermann, The economics of consumption and the labor movement after the war; Paul Lensch, The reorganization of economic life; Ferdinand Tönnies, Social politics after the war; Robert Schmidt, New departures in social politics; Ernst Troeltsch, The church and the social democracy; Paul Umbreit, Unemployment and the war; Paul Natorp, The rebirth of our nation after the war; Heinrich Schulz, The school system after the war; Friedrich Thimme, Cooperation, the way to domestic peace.

Verband der öffentlichen gemeinnützigen arbeitsnachweise des K. Sachsen. Niederschrift über die II. verbandsversammlung, Chemnitz, 1913. Leipzig, [1913] 96 pp.

—— Niederschrift * * * III. verbandsversammlung, 1914.

Reports of the second and third meetings (1913 and 1914) of the association of public employment offices of the Kingdom of Saxony, Germany.

Wisconsin. State Historical Society. Library. Collections on labor and socialism in the library. Madison, 1915. 14 pp.

Workers' International Industrial Union. Preamble and constitution. 1915. Detroit [1915] 32 pp.

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the annual and special reports and of the bimonthly bulletin has been discontinued, and since July, 1912, a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual bulletins falling under each, is given below. A list of the reports and bulletins of the bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

No. 1. Wholesale prices, 1890 to 1912. (Bul. No. 114.)
No. 2. Wholesale prices, 1890 to 1913. (Bul. No. 149.)
No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. No. 173.)
No. 4. Wholesale prices, 1890 to 1914. (Bul. No. 181.)
No. 5. Wholesale prices, 1890 to 1915. (Bul. No. 200.) [In press.]

Retail Prices and Cost of Living.

No. 1. Retail prices, 1890 to 1911: Part I. (Bul. No. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. No. 105: Part II.)
No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. No. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. No. 106: Part II.)
No. 3. Retail prices, 1890 to August, 1912. (Bul. No. 108.)
No. 4. Retail prices, 1890 to October, 1912. (Bul. No. 110.)
No. 5. Retail prices, 1890 to December, 1912. (Bul. No. 113.)
No. 6. Retail prices, 1890 to February, 1913. (Bul. No. 115.)
No. 7. Sugar prices, from refiner to consumer. (Bul. No. 121.)
No. 8. Retail prices, 1890 to April, 1913. (Bul. No. 125.)
No. 9. Wheat and flour prices, from farmer to consumer. (Bul. No. 130.)
No. 10. Retail prices, 1890 to June, 1913. (Bul. No. 132.)
No. 11. Retail prices, 1890 to August, 1913. (Bul. No. 136.)
No. 12. Retail prices, 1890 to October, 1913. (Bul. No. 138.)
No. 13. Retail prices, 1890 to December, 1913. (Bul. No. 140.)
No. 14. Retail prices, 1907 to December, 1914. (Bul. No. 156.)
No. 15. Butter prices, from producer to consumer. (Bul. No. 164.)
No. 16. Retail prices, 1907 to June, 1915. (Bul. No. 184.)
No. 17. Retail prices, 1907 to December, 1915. (Bul. No. 197.)

Wages and Hours of Labor.

No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. No. 128.)
No. 2. Wages and hours of labor in lumber, millwork, and furniture industries, 1890 to 1912. (Bul. 129.)
No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. No. 131.)
No. 4. Wages and hours in boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. No. 134.)
No. 5. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912. (Bul. No. 135.)
No. 6. Wages and hours in building and repairing of steam railroad cars, 1890 to 1912. (Bul. No. 137.)
No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. No. 143.)
No. 8. Wages and regularity of employment in dress and waist industry, New York City. (Bul. 146.)
No. 9. Wages and regularity of employment in the cloak, suit, and skirt industry. (Bul. No. 147.)
No. 10. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913. (Bul. 150.)
No. 11. Wages and hours of labor in iron and steel industry in U. S., 1907 to 1912. (Bul. No. 151.)
No. 12. Wages and hours in lumber, millwork, and furniture industries, 1907 to 1913. (Bul. No. 153.)
No. 13. Wages and hours of labor in boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. No. 154.)
No. 14. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913. (Bul. No. 161.)
No. 15. Wages and hours of labor in building and repairing of steam railroad cars, 1907 to 1913. (Bul. 163.)
No. 16. Wages and hours of labor in iron and steel industry in U. S., 1907 to 1913. (Bul. No. 168.)
No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. No. 171.)
No. 18. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914. (Bul. No. 177.)
No. 19. Wages and hours of labor in the boot and shoe industry, 1907 to 1914. (Bul. No. 178.)
No. 20. Wages and hours of labor in the men's clothing industry, 1911 to 1914. (Bul. No. 187.)
No. 21. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914. (Bul. No. 190.)
No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. No. 194.)

Employment and Unemployment.

No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. No. 192.)
No. 2. Unemployment in the United States. (Bul. No. 195.) [In press.]
No. 3. Proceedings of Employment Managers' Conference. (Bul. No. 196.)

For material relating to these subjects, but not included in this series, see Miscellaneous series, Nos. 1, 10, 12 (Buls. Nos. 109, 172, 183).

Women in Industry.

No. 1. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. (Bul. No. 116.)
No. 2. Working hours of women in the pea canneries of Wisconsin. (Bul. No. 119.)
No. 3. Employment of women in power laundries in Milwaukee. (Bul. No. 122.)
No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bul. No. 160.)
No. 5. Summary of report on condition of woman and child wage earners in U. S. (Bul. No. 175.)
No. 6. Effect of minimum-wage determinations in Oregon. (Bul. No. 176.)
No. 7. Women in the boot and shoe industry in Massachusetts. (Bul. No. 180.)
No. 8. Unemployment among women in department and other retail stores of Boston, Mass. (Bul. No. 182.)
No. 9. Dressmaking as a trade for women. (Bul. No. 193.) [In press.]

For material relating to this subject, but not included in this series, see Miscellaneous series, Nos. 2, 3, 8 (Buls. Nos. 117, 118, 167).

Workmen's Insurance and Compensation (including laws relating thereto).
No. 1. Care of tuberculous wage earners in Germany. (Bul. No. 101.)
No. 2. British National Insurance Act, 1911. (Bul. No. 102.)
No. 3. Sickness and accident insurance law of Switzerland. (Bul. No. 103.)
No. 4. Law relating to insurance of salaried employees in Germany. (Bul. No. 107.)
No. 5. Workmen's compensation laws of the United States and foreign countries. (Bul. No. 126.)
No. 6. Compensation for accidents to employees of the United States. (Bul. No. 155.)
No. 7. Compensation legislation of 1914 and 1915. (Bul. No. 185.)
No. 8. Compensation laws of the United States and foreign countries. (Bul. 203.) [In press.]

Industrial Accidents and Hygiene.
No. 1. Lead poisoning in potteries, tile works, and sanitary ware factories. (Bul. No. 104.)
No. 2. Hygiene of the painters' trade. (Bul. No. 120.)
No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bul. No. 127.)
No. 4. Lead poisoning in the smelting and refining of lead. (Bul. No. 141.)
No. 5. Industrial accident statistics. (Bul. No. 157.)
No. 6. Lead poisoning in the manufacture of storage batteries. (Bul. No. 165.)
No. 7. Industrial poisons used in the rubber industry. (Bul. No. 179.)
No. 8. Report of British departmental committee on danger in the use of lead in the painting of buildings. (Bul. No. 188.)
No. 9. Report of the committee on statistics and insurance cost of the International Association of Industrial Accident Boards and Commissions. (Bul. No. 201.) [In press. Limited edition.]
No. 10. Occupational anthrax. (Bul. No. 205.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).
No. 1. Conciliation and arbitration in the building trades of Greater New York. (Bul. No. 124.)
No. 2. Report of industrial council of British Board of Trade on its inquiry into industrial agreements. (Bul. No. 133.)
No. 3. Michigan copper district strike. (Bul. No. 139.)
No. 4. Industrial court of the cloak, suit, and skirt industry of New York City. (Bul. No. 144.)
No. 5. Conciliation, arbitration, etc., in dress and waist industry, New York City. (Bul. No. 145.)
No. 6. Collective bargaining in the anthracite coal industry. (Bul. No. 191.)
No. 7. Collective agreements in the men's clothing industry. (Bul. No. 198.) [In press.]

Labor Laws of the United States (including decisions of courts relating to labor).
No. 1. Labor legislation of 1912. (Bul. No. 111.)
No. 2. Decisions of courts and opinions affecting labor, 1912. (Bul. No. 112.)
No. 3. Labor laws of the United States, with decisions of courts relating thereto. (Bul. No. 148.)
No. 4. Decisions of courts and opinions affecting labor, 1913. (Bul. No. 152.)
No. 5. Labor legislation of 1914. (Bul. No. 166.)
No. 6. Decisions of courts affecting labor, 1914. (Bul. No. 169.)
No. 7. Labor legislation of 1915. (Bul. No. 186.)
No. 8. Decisions of courts affecting labor, 1915. (Bul. No. 189.)

Foreign Labor Laws.
No. 1. Administration of labor laws and factory inspection in European countries. (Bul. No. 142.)

Vocational Education.
No. 1. Vocational education survey of Minneapolis. (Bul. No. 199.) [In press.]

For material relating to this subject, but not included in this series, see Wages and hours of labor series, No. 9 (Bul. No. 147); Conciliation and arbitration series, No. 5 (Bul. No. 145); Miscellaneous series, Nos. 6, 7 (Buls. Nos. 159, 162).

Miscellaneous Series.
No. 1. Statistics of unemployment and the work of employment offices in United States. (Bul. No. 109.)
No. 2. Prohibition of nightwork of young persons. (Bul. No. 117.)
No. 3. Ten-hour maximum working-day for women and young persons. (Bul. No. 118.)
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No. 8. Minimum-wage legislation in the United States and foreign countries. (Bul. No. 167.)
No. 9. Foreign food prices as affected by the war. (Bul. No. 170.)
No. 10. Unemployment in New York City, N. Y. (Bul. No. 172.)
No. 11. Subject index of publications of U. S. Bureau of Labor Statistics to May 1, 1915. (Bul. No. 174.)
No. 12. Regularity of employment in the women's ready-to-wear garment industry. (Bul. No. 183.)

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U. S. DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

ROYAL MEEKER, Commissioner

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOLUME III—AUGUST, 1916—NUMBER 2

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MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOL. III—NO. 2 WASHINGTON AUGUST, 1916

ATTITUDE OF THE METHODIST EPISCOPAL CHURCH TOWARD LABOR.

One of the most significant matters discussed at the recent quadrennial conference of the Methodist Episcopal Church at Saratoga Springs, N. Y., May 1 to 29, was the future attitude of the Church toward organized labor and collective bargaining in particular. As the Methodist Church conducts one of the largest book concerns in the United States, employing several thousand workmen in the printing and allied trades, the question was one of considerable moment. The discussion arose in connection with the report, on May 12, of the committee on the state of the Church, which, reviewing the nature and methods of collective bargaining as a part of its report on the Church and the community, declared—

> It would naturally follow that since the Church is itself a large employer of labor, directly and indirectly, it must itself in some way realize collective bargaining either in one of the two forms which are now developed or in some other yet to be devised. A sound principle to govern the Church as an employer would appear to be that in recognition of the price being paid by organized labor to improve community welfare, *a preference should be shown to it,* and every possible endeavor [should be] made to work with it, in so far as its methods are just and in so far as the rights of unorganized men are not infringed upon.

This paragraph aroused considerable discussion and was changed the next day by striking out the italicized words and inserting the bracketed words. As changed, therefore, it is, for the moment, the final pronouncement of the Church on its attitude toward organized labor.

The general conference in question, which adopted the report under review, is composed of clergy and laity in equal numbers elected at annual conferences, which are representative gatherings within certain territorial districts recognized in the Church organization. The quadrennial general conferences establish the policies of the Church as an organized body; they are its supreme legislative authority.

The report in question, as presented by the committee on the state of the Church, is also the report of the Methodist Federation for Social Service, and was adopted by the committee. It seems also that the statement of principles contained in it are the result of more or less interdenominational effort and conference. (See Daily Christian Advocate, Saratoga Springs, N. Y., May 15, 1916, p. 231.) Sections 1 to 4 of the report were adopted by the committee by a vote of 109 to none opposing; section 5, on industrial democracy, by a vote of 105 to 6, with 115 present at the time the vote was taken.

The report discusses in general terms the Church and the community; the community service program; training for service; industrial conditions; and industrial democracy. That portion of it relative to industrial democracy (sec. 5) as printed in the Daily Christian Advocate, Saturday, May 10, 1916—published at Saratoga Springs, by the Methodist Book Concern—points out in general terms the widespread occurrence of strikes in recent years and the growing demand for the extension of the principles of democracy in industry. It declares that "the first method of realizing democracy in industry is through collective bargaining. This gives wage earners as a group the right to determine in conference with their employers the terms and conditions of employment." Therefore "the principle of collective bargaining being generally accepted, the urgent question is what method shall embody it. To recognize the principle without supporting some method that will make it effective is but to mock the hopes and struggles of the workers with barren words and to deserve their indignation and contempt."

Section 2 of the report, as a part of the program of the Church in its relation to its immediate community, recommends that during the next four years the Church put stress upon the problems of unemployment, housing, prison reform, and recreation, and it suggests that the churches in rural communities not only concern themselves with these problems but also give attention to farm labor, tenancy, and rural cooperation.

After review of the extent of unemployment, immediate measures for its diminution are suggested. "They involve the labor exchange to find work—municipal, State, and Federal; provisions of public work; social insurance against unemployment. These measures have been demonstrated in Europe. The Church must aid in securing them in our cities and States."

In the matter of housing it is stated that—

> The churches must demand the enactment of proper building codes and the enforcement of their regulations. But here again, while the churches must not hesitate to take their initiative, the greatest usefulness is in aligning themselves with the agencies

which are already in the field in most communities and are working steadily for adequate laws, thorough inspection of factories and dwellings, and enforcement of existing laws.

The relation between bad housing and both sickness of the body and sickness of the soul is established beyond question by many detailed studies. In dirt and darkness there breed the germs of sin and disease. In city and country, a sanitary dwelling with adequate room for privacy is essential to a sound family life.

Lack of recreation is held to be one of the potent causes of juvenile delinquency. Adequate programs of community recreation "involve the regulation of commercialized recreation; the development of parks, playgrounds, and community centers, with adequate supervision, and the encouragement of private recreational enterprises that are conducted for the public welfare. It is for the Church to lead the community into such a sense of the value of childhood that it will pay the cost of adequate community recreation as it now pays for community education."

There is every reason also why churches should make larger use of their buildings for such purposes; making them safe and happy meeting places for the people, and particularly for the children and young people of their neighborhood.

Section 4 of the report discusses at considerable length industrial conditions, including such questions as the living wage, the unequal distribution of wealth, and the effect of overwork on the laborer. On the question of the living wage the report reiterates the declaration of the conference of 1912 to the effect that the Church must stand for "a living wage as a minimum in every industry, and for the highest wage that each industry can afford," and for "the most equitable division of the product of industry that can ultimately be devised." Continuing it reviews the results of recent investigations regarding the cost of living and concludes with the declaration that "these facts challenge the Church to action."

The report protests against what it concludes to be the unequal distribution of wealth and urges the members of the Church "as employers, investors, or wage earners, to do everything that lies in their power to promote and initiate measures and movements that make for the realization of our standard of a living wage as already declared."

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, JUNE 16 TO JULY 15, 1916.

The organic act of the department gives the Secretary of Labor authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation. During the month, June 16 to July 15, 1916, the Secretary exercised his good offices in

12 labor disputes, the companies involved, the number of employees affected, and the results secured, so far as information is available, being as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, JUNE 16 TO JULY 15, 1916.

Name.	Workmen affected—		Result.
	Directly.	Indirectly.	
Strike at Harland & Hollingsworth Plant, Wilmington, Del.	700	1,123	Pending.
Strike of fine yarn spinners, Philadelphia, Pa., as follows:			
Jonathan Ring & Son	130	....	Do.
Mark D. Ring & Co	43	....	Do.
H. B. Thomas	32	....	Do.
Byrne & Hance	32	....	Do.
Chas. W. Haven	28	....	Do.
Klink & Landis	26	....	Do.
H. B. Rinehard	15	....	Do.
John W. Emsley	32	....	Do.
Bunker-Howard Spinning Co.	17	....	Do.
Lockout, Fluorspar Lead Co., Rosiclare, Ill.	400	....	Do.
Wage dispute between Bay & River Steamboatmen's Union and Steamboat Owners' Association, San Francisco, Cal.	....	....	Do.
Lockout, New Haven Carriage Co., New Haven, Conn.	250	....	Do.
Strike of machinists at United States Printing & Lithographic Co., and the United States Playing Card Co., Cincinnati, Ohio.	32	2,000	Adjusted.
Strike of dye workers, Philadelphia, Pa., as follows:			
T. A. Harris Co.	50	....	Do.
Nepaul Mills	28	....	Do.
Emerald Mill	10	....	Do.
Pollock, Huston Co.	18	....	Do.
James Kerr	8	....	Do.
S. B. & B. W. Fleischer	100	....	Do.
Wm. Woods & Co	20	....	Do.
Controversy between Missouri Pacific, St. Louis & Iron Mountain R. R. Co. and its maintenance-of-way employees, St. Louis, Mo.	12,000	....	Pending.
Strike, Rex & Co., Philadelphia, Pa	....	....	Do.
Controversy between Omaha World-Herald, and International Pressmen & Assistants Union.	....	....	Do.
Strike in mechanical department, Boston & Albany R. R. Co., Boston, Mass.	....	....	Do.
Controversy between Missouri Pacific Ry. Co. and its signalmen, St. Louis, Mo.	....	....	Do.

The following cases of strikes, noted as pending, in statement of June 15, have been adjusted:

Vanberg Silver Co., Rochester, N. Y.
Leolastic Co., Bayonne, N. J.
Maybrook Central New England Railway, Walden, N. Y.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During June, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 11,960 persons in employment as compared with 11,453 during May, 1916. The operations of the different offices throughout the country, by months, since May, 1915, when fuller reports began to be made, are contained in the statement following:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, DURING THE MONTHS OF MAY, 1915, TO JUNE, 1916.

Month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.
1915.					
May	638	3,826	12,132	3,752	3,495
June	1,249	3,601	14,530	5,131	4,646
July	1,160	8,665	18,061	6,360	6,035
August	1,279	7,931	17,827	7,321	6,757
September	1,201	4,551	13,334	5,671	5,405
October	1,104	5,423	12,215	5,460	5,006
November	847	4,650	11,908	4,459	4,146
December	698	3,588	11,902	2,622	2,170
1916.					
January	933	5,063	15,015	4,300	3,419
February	1,423	6,413	14,257	5,036	4,185
March	3,443	10,209	19,484	8,113	7,030
April	3,805	12,104	13,498	8,843	7,653
May	4,918	21,326	17,614	12,938	11,453
June	4,826	17,402	18,824	13,839	11,960

The following statement of the work of the 18 different zones covering the whole country gives details for May and June, 1916:

SUMMARY OF ACTIVITIES FOR THE MONTHS OF MAY AND JUNE, 1916.

Zone No. and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	May.	June.	May.	June.	May.	June.	May.	June.	May.	June.
1. Boston, Mass	7	5	1,542	151	75	146	10	76	10	76
Portland, Me	......	......	......	......	......	......	......	......	......	......
Total	7	5	1,542	151	75	146	10	76	10	76
2. New York, N. Y	280	275	1,439	1,496	1,375	1,129	804	578	768	526
Buffalo, N. Y	82	142	1,050	1,041	629	850	662	748	462	496
Total	362	417	2,489	2,537	2,004	1,979	1,466	1,326	1,230	1,022
3. Philadelphia, Pa	116	103	958	312	349	269	294	203	229	167
Pittsburgh, Pa	20	18	418	805	280	327	110	144	89	130
Total	136	121	1,376	1,117	629	596	404	347	318	297
4. Baltimore, Md	14	10	44	16	97	86	153	82	153	82
5. Norfolk, Va	14	19	26	307	100	102	83	34	62	21
6. Jacksonville, Fla	......	......	......	......	1,008	365	71	188	64	186
Charleston, S. C	3	6	4	303	307	106	8	132	8	132
Miami, Fla	6	5	32	8	96	44	34	8	29	8
Mobile, Ala	2	1	4	1	14	14	......	......	......	......
Savannah, Ga	3	8	66	269	439	872	66	265	63	264
Total	14	20	106	581	1,864	1,401	179	593	164	590
7. New Orleans, La	13	6	15	8	133	98	18	17	8	6
Gulfport, Miss	3	......	4	......	59	45	......	......	......	......
Memphis, Tenn	5	5	17	60	63	35	3	3	1	......
Total	21	11	36	68	255	178	21	20	9	6
8. Galveston, Tex	4	4	11	303	61	31	23	22	7	4
Amarillo, Tex	......	......	......	......	1	......	......	......	......	......
Brownsville, Tex	......	......	......	......	1	......	1	......	......	......
El Paso, Tex	......	......	......	......	1	......	......	......	......	......
Eagle Pass, Tex	......	......	......	......	......	......	......	......	......	......
Albuquerque, N. Mex	......	......	......	......	4	4	......	......	......	......
Houston, Tex	2	3	2	5	29	21	1	3	1	3
Laredo, Tex	......	......	......	......	......	......	......	......	......	......
San Angelo, Tex	......	......	......	......	......	......	......	......	......	......
Total	6	7	13	308	97	56	25	25	8	7

SUMMARY OF ACTIVITIES FOR THE MONTHS OF MAY AND JUNE, 1916—Concluded.

Zone No. and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	May.	June.	May.	June.	May.	June.	May.	June.	May.	June.
9. Cleveland, Ohio	23	22	443	120	100	98	79	68	15	19
10. Chicago, Ill.	203	302	1,370	1,250	1,769	1,875	1,036	1,101	1,005	1,062
Detroit, Mich	262	185	1,306	1,522	830	1,214	814	1,146	732	1,124
Indianapolis, Ind	76	75	241	519	267	852	271	708	264	482
Sault Ste. Marie, Mich	15	4	289	98	114	110	106	90	103	89
Total	556	566	3,206	3,389	2,980	4,051	2,227	3,045	2,104	2,757
11. Minneapolis, Minn	31	74	34	79	53	24	19	10	19	10
12. St. Louis, Mo	27	16	2,676	82	131	157	65	47	61	39
Kansas City, Mo	422	515	1,024	1,249	900	1,072	781	1,004	520	724
Total	449	531	3,700	1,331	1,031	1,229	846	1,051	581	763
13. Denver, Colo	6	5	17	8	29	67	15	55	8	1
Salt Lake City, Utah	......	......	......	......	......	......	......	......	......	......
Total	6	5	17	8	29	67	15	55	8	1
14. Helena, Mont	2	......	2	......	6	6	2	......	......	......
Moscow, Idaho	1	......	1	......	4	1	4	1	......	......
Total	3	......	3	......	10	7	6	1	......	......
15. Seattle, Wash	106	156	297	289	810	816	269	273	256	246
Aberdeen, Wash	15	11	60	61	220	387	60	61	60	61
Bellingham, Wash	31	14	140	70	104	133	103	58	95	54
Everett, Wash	8	4	33	7	27	24	11	7	11	7
Kennewick, Wash	125	......	900	......	850	......	825	......	825	......
North Yakima, Wash	322	431	484	711	848	931	470	564	447	546
Spokane, Wash	71	51	138	330	145	246	115	175	115	175
Takoma Wash	517	554	1,239	1,088	844	1,047	1,085	1,080	1,069	1,080
Walla Walla, Wash	113	122	179	216	305	325	176	220	170	212
Total	1,308	1,343	3,470	2,772	4,153	3,909	3,114	2,438	3,048	2,381
16. Portland, Oreg	1,330	1,035	3,128	3,386	1,708	2,197	2,644	3,161	2,404	2,874
17. San Francisco, Cal	296	348	665	685	1,315	1,539	481	675	331	478
18. Los Angeles, Cal	......	......	......	......	134	112	......	......	......	......
Bakersfield, Cal	2	1	17	5	16	5	16	4	16	4
San Diego, Cal	350	291	1,011	542	963	1,041	1,150	828	973	572
Tucson, Ariz	......	......	......	......	1	1	......	......	......	......
Total	352	292	1,028	547	1,114	1,159	1,166	832	989	576
Grand total[1]	4,918	4,826	21,326	17,402	17,614	18,824	12,938	13,839	11,453	11,960

[1] A special office at Kansas City, Mo., reported 78 applications for help in June, 37,509 persons applied for 3,751 applications received, 2,076 referred to employment, and 1,868 (estimated) actually employed.

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

In the following table data are presented relative to the operation of public employment offices. The table furnishes information for State employment bureaus in 14 States, municipal employment bureaus in 7 States, a State-city employment bureau in 1 State; a city-private employment bureau in 1 State, and a Federal-municipal employment bureau in 1 State. Figures are given for both June, 1915, and June, 1916, in cases where reports have been received for both periods; in other cases figures are given for June, 1916, only.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JUNE 1915 AND 1916.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work— New registrations.	Persons applying for work— Renewals.	Persons referred to positions.	Positions filled.
California (municipal):						
Berkeley—						
June, 1915	191	223	89	448	223	223
June, 1916	203	224	76	428	216	216
Sacramento—						
June, 1915	190	310	84	(1)	310	310
June, 1916	201	345	55	(1)	345	345
California (State-city):						
Los Angeles [2]—						
June, 1915	(1)	(1)	1,739	(1)	(1)	2,213
June, 1916	(1)	3,903	2,761	(1)	4,986	3,903
Total—						
June, 1915					533	2,746
June, 1916					5,547	4,464
Colorado (State):						
Colorado Springs—						
June, 1915	(1)	578	(1)	(1)	(1)	542
June, 1916	(1)	964	906	(1)	800	(1)
Denver, No. 1—						
June, 1915	(1)	242	(1)	(1)	(1)	196
June, 1916	(1)	422	415	(1)	344	(1)
Denver, No. 2—						
June, 1915	(1)	248	(1)	(1)	(1)	197
June, 1916	(1)	446	493	(1)	374	(1)
Pueblo—						
June, 1915	(1)	209	(1)	(1)	(1)	207
June, 1916	(1)	1,088	701	(1)	669	(1)
Total—						
June, 1915					(1)	1,142
June, 1916					2,187	(1)
Illinois (municipal):						
Chicago—June, 1916	[3] 33	615	300	(1)	615	165
Illinois (State):						
Chicago—						
June, 1915	(1)	2,864	2,027	(1)	(1)	1,540
June, 1916	(1)	10,848	8,069	(1)	(1)	7,516
East St. Louis—						
June, 1915	(1)	715	512	(1)	(1)	512
June, 1916	(1)	1,775	1,532	(1)	(1)	1,133
Peoria—						
June, 1915	(1)	549	463	(1)	(1)	463
June, 1916	(1)	959	1,171	(1)	(1)	906
Springfield—						
June, 1915	(1)	387	218	(1)	(1)	217
June, 1916	(1)	775	829	(1)	(1)	655
Rock Island-Moline—						
June, 1915	(1)	406	266	(1)	(1)	266
June, 1916	(1)	708	776	(1)	(1)	575
Rockford—						
June, 1915	(1)	436	328	(1)	(1)	328
June, 1916	(1)	893	996	(1)	(1)	762
Total—						
June, 1915					(1)	3,326
June, 1916					615	11,712
Indiana (State):						
Evansville—						
June, 1915	37	149	263	(1)	263	149
June, 1916	68	690	880	(1)	880	690
Fort Wayne—						
June, 1915	190	230	222	111	333	218
June, 1916	401	682	436	173	609	504
South Bend—						
June, 1915	131	251	388	67	241	204
June, 1916	267	1,141	511	61	561	426
Terre Haute—						
June, 1915	(1)	284	(1)	(1)	302	265
June, 1916	(1)	561	(1)	(1)	470	426
Total—						
June, 1915					1,139	836
June, 1916					2,520	2,046

[1] Not reported.

[2] Includes Los Angeles district, 8 counties.

[3] Number of requisitions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JUNE, 1915 AND 1916—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Kansas (State):						
Topeka—						
June, 1915[1]	26	34	95	10	50	28
June, 1916[1]	31	61	126	4	80	59
Kentucky (city-private):						
Louisville—						
June, 1915	(2)	102	405	753	85	51
June, 1916	(2)	304	553	722	385	191
Kentucky (State):						
Louisville—						
June, 1915	48	48	[3] 194	....	146	48
June, 1916	362	362	[3] 538	....	177	362
Total—						
June, 1915	....	....	....	....	231	99
June, 1916	....	....	....	....	562	553
Massachusetts (State):						
Boston—						
June, 1915	1,341	1,597	[4] 1,025	(2)	[5] 2,783	1,350
June, 1916	2,347	2,663	[4] 1,696	(2)	[5] 3,997	1,845
Fall River—						
June, 1915	127	132	[4] 24	(2)	[5] 120	106
June, 1916	138	172	[4] 38	(2)	[5] 146	114
Springfield—						
June, 1915	558	635	[4] 282	(2)	[5] 859	484
June, 1916	983	1,233	[4] 642	(2)	[5] 1,601	931
Worcester—						
June, 1915	535	613	[4] 533	(2)	[5] 937	478
June, 1916	1,098	1,408	[4] 577	(2)	[5] 1,410	735
Total—						
June, 1915	....	....	....	....	[5] 4,699	2,418
June, 1916	....	....	....	....	[5] 7,154	3,625
Michigan (State):						
Battle Creek—						
June, 1916	96	216	[1] 238	(2)	108	108
Bay City—						
June, 1916	81	294	[1] 250	(2)	137	137
Detroit—						
June, 1915	(2)	(2)	(2)	(2)	(2)	1,681
June, 1916	1,259	5,127	[1] 4,994	(2)	4,815	4,815
Flint—						
June, 1915	(2)	(2)	(2)	(2)	(2)	294
June, 1916	424	894	[1] 798	(2)	798	798
Grand Rapids—						
June, 1915	(2)	(2)	(2)	(2)	(2)	631
June, 1916	462	1,002	[1] 973	(2)	955	955
Jackson—						
June, 1915	(2)	(2)	(2)	(2)	(2)	438
June, 1916	314	761	[1] 728	(2)	721	706
Kalamazoo—						
June, 1915	(2)	(2)	(2)	(2)	(2)	332
June, 1916	416	437	[6] 416	(2)	416	416
Lansing—						
June, 1916	67	344	[6] 335	(2)	325	325
Muskegon—						
June, 1916	47	294	[6] 255	(2)	252	252
Saginaw—						
June, 1915	(2)	(2)	(2)	(2)	(2)	835
June, 1916	158	912	[6] 814	(2)	814	814
Total—						
June, 1915	....	....	....	....	(1)	4,211
June, 1916	....	....	....	....	9,341	9,326

[1] Figures do not include thousands who applied for harvest work.
[2] Not reported.
[3] Number applying for work.
[4] Number who were registered.
[5] Number of offers of positions.
[6] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JUNE, 1915 AND 1916—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Minnesota (State):						
Duluth—						
June, 1915	(1)	(1)	(1)	(1)	(1)	760
June, 1916	(1)	(1)	(1)	(1)	(1)	1,636
Minneapolis—						
June, 1915	(1)	(1)	(1)	(1)	(1)	1,417
June, 1916	(1)	(1)	(1)	(1)	(1)	2,040
St. Paul—						
June, 1915	(1)	(1)	(1)	(1)	(1)	719
June, 1916	(1)	(1)	(1)	(1)	(1)	1,292
Total—						
June, 1915	....	....	....	....	(1)	2,896
June, 1916	....	....	....	....	(1)	4,968
Missouri (State):						
Kansas City—						
June, 1915	(1)	242	[2] 313	(1)	(1)	222
June, 1916	515	1,249	854	(1)	1,004	724
St. Joseph—						
June, 1915	(1)	2,013	[2] 1,621	(1)	(1)	1,607
June, 1916	(1)	1,709	[2] 1,255	(1)	1,255	1,255
St. Louis—						
June, 1915	(1)	289	[2] 573	(1)	(1)	246
June, 1916	(1)	469	[2] 406	(1)	242	242
Total—						
June, 1915	....	....	....	....	(1)	2,075
June, 1916	....	....	....	....	2,501	2,221
Montana (municipal):						
Butte—						
June, 1915	293	352	400	....	(1)	241
June, 1916	466	400	350	(1)	(1)	556
New Jersey (municipal):						
June, 1915	....	....	....	....	971	538
June, 1916	....	....	....	....	1,842	1,310
New York (municipal):						
New York City—						
June, 1915	303	465	2,046	....	829	422
June, 1916	2,335	2,666	2,332	....	3,367	2,176
New York (State):						
Albany—						
June, 1915	216	253	765	6	424	171
June, 1916	526	692	491	202	660	373
Brooklyn—						
June, 1915	456	804	2,129	813	1,178	486
June, 1916	1,467	2,140	1,756	411	2,276	1,375
Buffalo—						
June, 1915	317	467	1,399	123	542	346
June, 1916	1,026	1,869	1,105	122	1,514	1,139
Rochester—						
June, 1915	441	676	1,076	136	707	329
June, 1916	1,118	1,740	900	231	1,511	820
Syracuse—						
June, 1915	582	989	1,215	140	1,065	532
June, 1916	775	914	513	44	826	619
Total—						
June, 1915	....	....	....	....	4,745	2,286
June, 1916	....	....	....	....	10,154	6,502

[1] Not reported.

[2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JUNE, 1915 AND 1916—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Ohio:						
Akron—						
June, 1915	(1)	594	1,084	1,596	641	440
June, 1916	(1)	1,923	789	1,640	1,690	1,383
Cincinnati—						
June, 1915	(1)	714	1,836	4,702	849	591
June, 1916	(1)	1,660	1,257	2,707	1,515	923
Cleveland—						
June, 1915	(1)	3,523	2,888	6,696	3,321	2,608
June, 1916	(1)	9,095	3,132	8,023	7,588	6,128
Columbus—						
June, 1915	(1)	1,099	867	2,975	1,076	941
June, 1916	(1)	2,358	701	2,138	2,053	1,661
Dayton—						
June, 1915	(1)	619	836	2,015	600	529
June, 1916	(1)	1,104	692	1,068	955	836
Toledo—						
June, 1915	(1)	1,380	1,469	2,651	1,271	1,261
June, 1916	(1)	3,366	1,370	1,934	2,414	2,075
Youngstown—						
June, 1915	(1)	599	641	906	639	498
June, 1916	(1)	1,279	711	1,208	1,201	1,044
Total—						
June, 1915					8,397	6,868
June, 1916					17,416	14,050
Oklahoma (State):						
Enid—						
June, 1915	(1)	49	(1)	(1)	(1)	37
June, 1916	(1)	812	(1)	(1)	(1)	804
Muskogee—						
June, 1915	(1)	164	(1)	(1)	(1)	154
June, 1916	(1)	524	(1)	(1)	(1)	262
Oklahoma City—						
June, 1915	(1)	243	(1)	(1)	(1)	203
June, 1916	(1)	1,139	(1)	(1)	(1)	769
Tulsa—						
June, 1915	(1)	(1)	(1)	(1)	(1)	(1)
June, 1916	(1)	965	(1)	(1)	(1)	928
Total—						
June, 1915					(1)	394
June, 1916					(1)	2,763
Pennsylvania (State):						
Altoona—						
June, 1916	(1)	172	59		37	37
Harrisburg—						
June, 1916	(1)	999	425	64	447	440
Johnstown—						
June, 1916	(1)	204	54	10	57	46
Philadelphia—						
June, 1916	(1)	458	719	257	536	290
Pittsburgh—						
June, 1916	(1)	1,516	1,163	99	873	806
Total—						
June, 1916					1,950	1,619
Rhode Island (State):						
Providence—						
June, 1915	346	520	271	194	520	520
June, 1916	311	359	246	236	359	359
Texas (municipal):						
Dallas—						
June, 1915	359	173	359	20	173	153
June, 1916	74	8	74	8	289	289
Fort Worth—						
June, 1915	123	522	[2] 974	(1)	654	406
June, 1916	177	637	372	55	341	332
Total—						
June, 1915					827	559
June, 1916					630	621

[1] Not reported.

[2] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES JUNE, 1915 AND 1916—Concluded.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Virginia (municipal):						
Richmond—						
June, 1915	136	237	[1] 659	(2)	238	166
June, 1916	210	542	851	(2)	729	320
Washington (Federal-municipal):						
Tacoma—						
June, 1915	236	390	(2)	(2)	397	390
June, 1916	327	1,080	1,000	(2)	1,080	1,080
Washington (municipal):						
Everett—						
June, 1915	(2)	(2)	(2)	(2)	(2)	148
June, 1916	(2)	(2)	(2)	(2)	(2)	402
Seattle—						
June, 1916	3,201	5,922	(2)	(2)	5,904	5,417
Spokane—						
June, 1915	(2)	(2)	(2)	(2)	718	674
June, 1916	1,890	2,862	....	....	2,430	2,426
Total—						
June, 1915	....	....	....	....	1,115	1,212
June, 1916	....	....	....	....	9,414	9,325
Wisconsin (State):						
La Crosse—						
June, 1915	122	192	[3] 343	(2)	177	87
June, 1916	171	242	273	(2)	202	138
Milwaukee—						
June, 1915	1,440	2,450	[3] 3,319	(2)	2,475	1,681
June, 1916	2,016	3,528	2,718	(2)	2,903	1,868
Oshkosh—						
June, 1915	188	202	[3] 359	(2)	164	140
June, 1916	136	164	199	(2)	136	94
Superior—						
June, 1915	270	338	[3] 822	(2)	429	290
June, 1916	442	1,363	1,161	(2)	1,216	888
Total—						
June, 1915	2,020	3,182	[3] 4,843	(2)	3,245	2,198
June, 1916	2,765	5,297	4,351	(2)	4,457	2,988

[1] Number applying for work. [2] Not reported. [3] Registrations.

EMPLOYMENT IN SELECTED INDUSTRIES IN JUNE, 1916.

Below will be found four tables showing the changes in the amount of employment in representative establishments in 10 manufacturing industries between June, 1915, and June, 1916, and between May, 1916, and June, 1916. This information is presented month by month in this publication, and is believed to be a good barometer of the fluctuations in the number of employees carried on the pay rolls of the industries represented and of the money paid out in wages.

In the first table it appears that the number of employees on the pay roll was greater in all the industries listed in June, 1916, than in June, 1915, except in cotton manufacturing and cigar manufacturing. The greatest increase was 28.6 per cent in the iron and steel industry. In all the industries employees were paid more money in wages in June, 1916, than in June, 1915, the greatest increase being 57.2 per cent in the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JUNE, 1915, AND JUNE, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for June both years.	Period of pay roll.	Number on pay roll in June—		Per cent of increase (+) or decrease (−).	Amount of pay roll in June—		Per cent of increase (+) or decrease (−).
				1915	1916		1915	1916	
Boots and shoes	86	59	1 week	39,417	48,512	+23.1	$452,197	$644,455	+42.5
Cotton manufacturing.	92	48	...do	40,248	40,034	− .5	338,717	392,276	+15.8
Cotton finishing	19	9	...do	6,684	7,403	+10.8	67,813	86,968	+28.2
Hosiery and underwear.	82	49	...do	26,395	28,285	+ 7.2	234,355	277,743	+18.5
Woolen	56	44	...do	35,108	40,455	+15.2	337,063	482,373	+43.1
Silk	64	43	2 weeks	14,019	15,625	+11.5	265,803	347,176	+30.6
Men's ready-made clothing.	85	36	1 week	22,203	24,560	+10.6	293,504	358,956	+22.3
Iron and steel	142	94	½ month	106,911	137,524	+28.6	3,396,861	5,338,785	+57.2
Car building and repairing.	80	21	...do	24,518	31,260	+27.5	727,661	1,006,365	+38.3
Cigar manufacturing.	107	57	1 week	19,368	18,729	− 3.3	196,628	204,258	+ 3.9

As an additional measure of the changes in the number of employees, figures were requested, in recent inquiries, as to the number of employees actually working on the last full day of the pay-roll period, as distinguished from the number on the pay roll who worked the whole or some part of the pay period. Returns for this question were received from only a part of the firms reporting other items. The figures therefore differ from those of the preceding table, but the general trend is about the same.

All industries show an increase in the number employed on the last full day in June, 1916, over June, 1915, except cotton manufacturing and cigar manufacturing. This corresponds with the showing for the number reported in the table above as appearing on the pay roll in June, 1916, and June, 1915. The greatest increase shown in this table was 29 per cent for the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN JUNE, 1915, AND JUNE, 1916.

Industry.	Establishments reporting for June both years.	Period of pay roll.	Number actually working on last full day of reported pay period in June—		Per cent of increase (+) or decrease (−).
			1915	1916	
Boots and shoes	25	1 week	15,129	17,778	+17.5
Cotton manufacturing	28	...do	20,766	20,558	− 1.0
Cotton finishing	6	...do	3,765	4,013	+ 6.6
Hosiery and underwear	15	...do	9,896	10,392	+ 5.0
Woolen	42	...do	23,096	28,547	+23.6
Silk	35	2 weeks	12,041	13,316	+10.6
Men's ready-made clothing	10	1 week	894	988	+10.5
Iron and steel	81	½ month	86,444	111,527	+29.0
Car building and repairing	19	...do	22,795	27,998	+22.8
Cigar manufacturing	31	1 week	7,877	7,600	− 3.5

Comparing May, 1916, and June, 1916, in the following table, 7 of the industries listed show an increase in the number of employees on the pay roll and 3 show a reduction. The greatest increase is 8.5 per cent, for the men's ready-made clothing industry, and the greatest reduction is 4.1 per cent, for the car building and repairing industry. Six of the ten industries show an increase in the amount of money paid out in wages to employees in June, 1916, over May, 1916, the the greatest increase being 17.2 per cent, in the men's ready-made clothing industry. The greatest reduction is 6.6 per cent, in the car building and repairing industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MAY, 1916, AND JUNE, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for May and June.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
				May, 1916.	June, 1916.		May, 1916.	June, 1916.	
Boots and shoes	86	58	1 week	47,365	47,974	+1.3	$619,103	$637,615	+ 3.0
Cotton manufacturing.	92	45	...do	37,493	37,605	+ .3	358,663	356,492	− .6
Cotton finishing	19	8	...do	5,026	5,106	+1.6	59,223	59,644	+ .7
Hosiery and underwear.	82	47	...do	27,290	27,208	− .3	263,045	260,483	− 1.0
Woolen	56	43	...do	35,191	34,301	−2.5	432,069	413,676	− 4.3
Silk	64	39	2 weeks	12,149	12,257	+ .9	262,116	267,626	+ 2.1
Men's ready-made clothing.	85	33	1 week	15,414	16,722	+8.5	194,656	228,122	+17.2
Iron and steel	142	89	½ month	125,682	127,188	+1.2	4,846,941	4,941,325	+ 1.9
Car building and repairing.	80	20	...do	31,276	30,007	−4.1	1,033,554	965,218	− 6.6
Cigar manufacturing	107	56	1 week	18,780	18,865	+ .5	200,607	202,316	+ .9

The next table shows the number actually employed on the last full day's operation in the reported pay period for May, 1916, and June, 1916. The number of establishments reporting this item is much smaller than the number reporting for the preceding table and the percentages to some extent are at variance. The table is presented, however, as speaking for the establishments included. In six of the ten industries listed the number actually at work on the last full day's operation in June, 1916, was greater than on a similar day in May, 1916. The greatest increase is 2.7 per cent, for the silk industry; the greatest reduction is 3.6 per cent, for the woolen industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN MAY, 1916, AND JUNE, 1916.

Industry.	Establishments reporting for May and June.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			May, 1916.	June, 1916.	
Boots and shoes	24	1 week	17,706	17,894	+1.1
Cotton manufacturing	28	...do	20,609	20,406	−1.0
Cotton finishing	5	...do	3,605	3,687	+2.3
Hosiery and underwear	16	...do	10,888	10,905	+ .2
Woolen	41	...do	27,168	26,183	−3.6
Silk	32	2 weeks	9,926	10,192	+2.7
Men's ready-made clothing	8	1 week	856	861	+ .6
Iron and steel	84	½ month	104,410	105,963	+1.5
Car building and repairing	18	...do	27,571	26,745	−3.0
Cigar manufacturing	31	1 week	7,773	7,739	− .4

RECENT CHANGES IN WAGE RATES.

In connection with the volume of employment inquiries sent to reporting establishments for June, 1915, and June, 1916, information was asked as to any general changes in wage rates during the period from June 1, 1916, to the time of the rendering of the requested report. Many establishments failed to report. It is probably safe to assume that in most cases the omission of a definite reply indicates no change. The number of changes reported were few, as is indicated below for the various industries.

Boots and shoes.—The only increases reported in this industry are an increase of 9 to 17 per cent to employees in one department of one establishment; a general increase of "about 15 per cent" reported by one establishment; "few slight increases" reported by one establishment, and "only as occasion required" reported by one establishment. Twenty plants reported no change, and 37 establishments failed to answer the inquiry.

Car building and repairing.—Reports were received from 21 establishments. The only change reported was an increase of 1½ per cent in one plant, affecting all employees. Nineteen establishments reported no change, and one establishment failed to answer the inquiry.

Cigar manufacturing.—Out of 60 establishments reporting as to employment, only one change in wages—an increase of 33⅓ per cent to stemmers—was reported. Thirty-one establishments reported no change, and 28 failed to answer the inquiry.

Men's ready-made clothing.—Six establishments out of 37 reporting as to employment noted an increase of 10 per cent in wages applying in various instances to from about a third of the force to as high as 85 per cent of the force. One concern reported an increase of "about

10 per cent." Twenty-five plants failed to answer the inquiry, and five establishments reported no change.

Cotton manufacturing.—Reports were received from 50 establishments of which only two reported any change in wage rates. One reported an increase of about 2 per cent applied to nearly all the force, and the other a general increase, amount not stated. Thirty-seven plants reported no change, and 11 failed to answer the inquiry.

Cotton finishing.—Out of the nine reporting, seven plants reported no change in wage rates and two failed to answer the inquiry.

Hosiery and underwear.—One plant reported an increase of 5 per cent to the entire force; one an increase of 5 to 10 per cent "at various times;" one an increase of 10 per cent without statement of number of force affected, and one a general increase of 10 to 15 per cent. Fifteen plants reported no change in rates, and 34 failed to answer the inquiry.

Iron and steel.—More changes in wage rates were reported for the iron and steel industry than for any other. Twelve establishments reported increases as follows: Two per cent to a little over half the force in one establishment; 5 per cent on a few positions in two establishments; 5 per cent to a third of the force in one establishment; and 5 per cent to three-fourths of the force in another. One plant reported an increase of 7½ per cent to "labor" and another an increase of 5 to 10 per cent without specifying the proportion of force affected. A 10 per cent increase was made in one plant to the men in a single department, while another made a 10 per cent increase to 40 per cent of the force; three establishments reported an increase of 10 per cent to all employees. Fifty-two plants reported no change, and 34 failed to make a report. The reported increases were not confined to any particular locality.

Silk.—One establishment reported an increase of 5 per cent to all, and another an increase of 10 per cent in some departments. Twenty-five establishments reported no change, and 15 failed to answer the inquiry.

Woolen.—Reports were received from 47 plants, none of which reported any change in the wage rate. Six plants failed to answer the inquiry.

EMPLOYMENT IN THE STATE OF NEW YORK IN JUNE, 1916.

The condition of employment in the State of New York in June, 1916, is set forth in the following statement issued by the New York State Industrial Commission:

Measured in total amount of wages paid, activity in the factories of New York State was greater in June than in any other month of the previous two years. The total number of employees was greater than in May and only slightly less than in April, which holds the record for the two years. Had it not been for the strike in the women's clothing industry and minor labor troubles, both the total wages paid and the total number of employees would have established new high records in June of this year. These results are shown by returns * * * from 1,400 representative firms with over 500,000 employees.

The total number of employees was 16 per cent greater in June, 1916, than in June, 1915, and 13 per cent greater than in June, 1914. The corresponding percentages for increases in total wages were 31 and 30 per cent, respectively. As in the preceding months of the past year, the total amount of wages continues to increase faster than the total number of employees.

From May to June the number of workers employed in the *stone, clay, and glass products* group increased 3 per cent and total wages increased 5 per cent. The number of employees was one-eighth and the amount of wages was one-fourth greater in June, 1916, than in June, 1915. In the *metals, machinery, and conveyances* group the high record for the number of employees which was established in May was slightly exceeded in June and the total of wages for the group was only slightly greater in June than in May. The number of employees was one-third, and the amount of wages was one-half, greater in June, 1916, than in June, 1915. The *wood manufactures* group employed 2 per cent more workers and paid 2 per cent more wages in June than in May, and employed one-twelfth more workers and paid one-sixth more wages in June, 1916, than in June, 1915. The *furs, leather, and rubber goods* group exceeded the high record of May in the total number of employees by 1 per cent. An increase of 4 per cent in the total wages paid in the group was shared by each industry. The group employed one-fifth more workers and paid two-fifths more wages in June, 1916, than in June, 1915. The *chemicals, oils, and paints* group employed 2 per cent more workers and paid 2 per cent more wages in June than in May. The group as a whole employed one-fifth more workers and paid three-tenths more wages in June, 1916, than in June, 1915. The *paper-making* industry employed 2 per cent more workers and paid 5 per cent more wages in June than in May, and employed one-sixth more workers and paid two-fifths more wages in June, 1916, than in June, 1915. The *printing and paper goods* group employed 1 per cent less workers and paid slightly less wages in June than in May. These decreases occurred in the manufacture of miscellaneous paper goods. The group as a whole employed one-sixteenth more workers and paid one-ninth more wages in June, 1916, than in June, 1915. The *textiles* group employed 3 per cent more workers and paid 4 per cent more wages in June than in May, and employed one-eleventh more workers and paid one-fourth more wages in June, 1916, than in June, 1915. The number of employees in the *clothing, millinery, and laundering* group decreased 3 per cent and wages decreased 2 per cent from May to June. The strike in the women's clothing industry is responsible for most of these decreases. The group as a whole employed 1 per cent fewer workers but paid one-eleventh more wages in June, 1916, than in June, 1915. The *food, liquors, and tobacco* group employed 3 per cent more workers and paid 4 per cent more wages in June than in May, and although employing less than 1 per cent more workers in June, 1916, than in June, 1915, it paid one-eighth more wages during the same time. The *water, light, and power* industry employed 4 per cent more workers and paid 7 per cent more wages in June than in May, and had 1 per cent more workers and paid one-tenth more wages in June, 1916, than in June, 1915.

EMPLOYMENT MANAGERS' CONFERENCE HELD IN MINNEAPOLIS, JANUARY, 1916.[1]

In connection with the annual convention of the National Society for the Promotion of Industrial Education and at the special invitation of the Minneapolis Civic and Commerce Association, an informal conference on employment management problems was held at Minneapolis on January 19 and 20, 1916, preceding the opening of the national society convention. The proceedings of this conference of employment managers are printed as Bulletin No. 196 of the United States Bureau of Labor Statistics. The program included the following papers and an address by Secretary Redfield of the Department of Commerce, each session closing with a general discussion of the topics presented:

The function of the employment department, by R. C. Clothier, manager, employment department, Curtis Publishing Co., Philadelphia.

Methods of reducing the labor turnover, by Boyd Fisher, vice president Executives' Club, Detroit Board of Commerce, Detroit.

Public employment bureaus and their relation to the managers of employment in industry, by Hilda Muhlhauser, director, Girls' and Women's Bureau, Cleveland.

University schools of business and the training of employment executives, by Harlow S. Person, director, Amos Tuck School of Administration and Finance, Dartmouth College, New Hampshire.

The aim and work of employment managers' associations, by Meyer Bloomfield, director, Vocation Bureau, Boston.

The new apprenticeship as a factor in reducing labor turnover, by Charles A. Prosser, director, Dunwoody Industrial Institute, Minneapolis.

Training the immigrant in industry, by William C. Smith, specialist in classes for illiterates, State Department of Education, Albany.

Work of the employment department of the Ford Motor Co., by George Bundy, employment manager.

The first speaker declared that the function of the employment department is "to develop the efficiency of the workers, directly or indirectly, and to bring about a condition in which the individual employee will render as near as possible 100 per cent service to his employer." Four subordinate functions were mentioned: (1) Selection—the function of engaging employees; (2) instruction—the function of developing their efficiency for their particular tasks; (3) welfare work—the function of creating a favorable mental background for their work; (4) medical work—the function of protecting their physical health.

The importance of the employment department winning the cooperation of the executives with whom it works, through actual service rendered to those executives, is strongly emphasized. An important problem to be considered by the employment department is the reduction of the labor turnover; that is, the proportion of the employees hired to the total pay roll. This reduction in turnover may be effected by attention to the first three functions mentioned above, by reducing the number of arbitrary dismissals, by standardizing the rate of production, and by maintaining a clearing house for labor between the various departments. Ultimate discharge from the company should take place only through the employment department and not because of some superficial reason or the whim of a superior. By the very nature of its field the employment department must be a department primarily for the service of the other departments.

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[1] Proceedings of employment managers' conference, held under the auspices of the National Society for the Promotion of Industrial Education and the Minneapolis Civic and Commerce Association, January 19 and 20, 1916. United States Bureau of Labor Statistics, Bulletin 196, Washington, 1916. 82 pp.

The paper outlining methods of reducing the labor turnover presented a threefold classification of the causes of the mobility of labor: (1) Men are fired, (2) men are laid off, and (3) men quit voluntarily. It was pointed out that men are fired because overworked foremen are prompted to seek an outlet for their own weariness or irritation, because of religious or national prejudice in the mind of the foreman himself, and because men are incompetent. Men are laid off because the scheduling of the work through the shop is faulty, resulting in congestion or oversupply of labor in various operations, and because of dull seasons. Men leave their jobs voluntarily because of low wages, long hours, inequalities in the pay system, differences among themselves on religious and racial questions, and because of sensitiveness over trivial wrongs or fancied oppressions. Five remedies to meet this condition were suggested: (1) A central employment department, (2) physical examinations, (3) industrial education, (4) regularized production, and (5) square-deal management. Of the above the first was urged as of prime importance.

The paper on the subject of public employment bureaus and their relation to managers of employment in industry recited methods pursued by the public employment bureau in Cleveland which has undertaken to centralize the labor market by taking over all the employment departments of separate organizations—such as the Y. W. C. A., the settlements, and institutions,—to investigate the methods of private employment agencies, and to centralize community interest in order to secure the cooperation of employers, labor organizations, and interested individuals. All employers are investigated and all applicants are followed up to see what becomes of them. Employment managers are brought to realize the value of using public employment bureaus. The city-State-Federal plan of bringing the man and the job together was indorsed as a means for diminishing unemployment and checking the great waste involved in frequent labor turnover. Employment managers were urged to utilize this force and to cooperate in carrying out this plan.

In the paper on university schools of business and the training of employment executives, the functions of the employment executive were outlined as follows: (1) Developing directly the technical productive efficiency of the individual employee; (2) developing indirectly such efficiency by assuring to the employee his rights as an economic even though not a legal partner in the business; and (3) dealing with the largest administrative policies and problems of the business. The necessary qualifications of the employment executive, which are determined largely by these functions, include personality, intellect, and knowledge, and the training he receives should be such as to develop each of these qualifications to the highest degree possible. The paper discussed in detail the personal and mental characteristics and the system of training necessary for proper equipment, and closed with an outline of a course of training.

"The aim and work of employment managers' associations" was the first paper read on the second day of the conference. In it was reviewed briefly the organization, four years ago, of the Employment Managers' Association of Boston which brought together about 50 men "not only to consider their responsibility as employment men but to consider the question of where they fitted into the scheme of things." The paper suggested that the employment managers had been giving very little thought to the coming and going of workmen, to the reasons why men are separated from their jobs, to the cost involved in changing employees, and kindred subjects. In short, it was explained that managers have been groping about in tackling the problems that confront them, and to remedy this condition the paper urged the necessity of arriving at a basis or a policy in employment management through detailed studies, "such as are being made in plant after plant, checking the sources of abuse, clipping irresponsible authority, opening the channels of promotion, and assuring permanence and regularity of employment, and most of all, making men while making profits."

In the paper discussing the new apprenticeship as a factor in reducing the labor turnover, labor turnover is defined as meaning the employing of too many poor men to get a standard organization of good men for a plant, and by new apprenticeship is meant a new system in which the school will play a large part in the selection and training of workers, whether for nonskilled, medium skilled, or highly skilled trades and industries, and whether by all-day, part-time, or evening school. The idea of the employment managers' association was indorsed, and how Minneapolis is trying to establish a bureau of vocational guidance and direction—not a bureau of placement—was suggested, the author emphasizing his belief that such a bureau will not be made effective "until in some way cooperative relations be established between persons in that bureau who have to do with the youth—as they leave the schools to seek positions—and an employment managers' association which has to do with their selection and placement in plants." Reference was made to the vocational education survey recently conducted in Minneapolis, as a result of which trade understandings have been established with about 24 different trades and industries by which employers have agreed to give preference to those who have taken industrial or technical instruction. Emphasis was placed on the part to be taken in the selection and training of workers by the continuation schools, the part-time schools, and the evening schools.

> Whether you talk about selecting, or inducting, or training, or promoting the workers, the school must have its place. * * * It is the public schools and the private schools working in harmony together, facing the employer, facing the employment manager, facing the trade-unions, and facing the man who is not a member of the union, and saying to all alike, "The school has its message, and no question of larger production, no question of better production, no questions of selecting, inducting, training, and promoting workers, can be solved without it."

The paper on training the immigrant in industry opened with a statement that the five M's of business are materials, machinery, money, merchandising, and men, and then suggested that as much attention must be devoted to the last as to the other four. Stress was laid upon the Americanization of the foreigner, "English first" being the slogan.

The work of the employment department of the Ford Motor Co. was described by its manager. He stated that all men are employed through written applications only, and described the method of filing these and keeping track of the vacancies in the plant. Various forms used by the employment department were exhibited. An occupation record of each man is carefully kept, so that men fitted for other work than they are doing may be transferred. No foreman is permitted to fire a man except in so far as his own department is concerned, and then he must give a written reason. The employee is usually given opportunity in another department. A circular on safety, health, and better living, devoted to the interests of the Ford employee, was exhibited, this circular being placed in each employee's pay envelope from time to time. Reference was made to the work of the "Ford English school," where, it was stated, they are making citizens out of the men by teaching them English, for "we figure that if you can make a citizen out of a foreigner, and teach him to be a good citizen of this country, and make a good American out of him, it is doing a good work."

Secretary Redfield told of his business experience in the placing of the product to keep the employment end busy, and mentioned some of the results which followed what he termed "a kind of scientific employment." In the factory to which he referred it was the policy that no man should be discharged and it was therefore up to the selling department to keep that policy moving. Care was exercised in the employment of men, which was handled by one executive. A policy of watching men grow in efficiency was adopted, and pay was voluntarily increased as soon as deserved. Reduction of wages never occurred. The result of this policy was a factory force of "very unusual quality and of very unusual productiveness." The Secretary urged the importance of hiring men with the same care that a machine is purchased, proper attention being given to the kind of men employed, always with the thought that "brains and hearts and dispositions and all sorts of elements that make up a personality," are being hired and not merely "hands." One element neglected in the employment problem, asserted the Secretary, is the human capacity for responsiveness, that is, a man wholly unadapted for a certain job is allowed to continue because he was hired for that particular job, whereas his efficiency would be increased if put at work for which he is better fitted. The idea of selection in many of our shops and offices is wholly unknown, it was stated. The benefits of welfare work in factories were dwelt upon briefly.

In the general discussion it was brought out that an employment managers' association is not supposed to take the place of a manufacturers' association, that it has no policy with regard to organized labor, and that it should take no part in legislative matters relating to labor; but that it should be a forum of information and experience, and that employees should be made to feel that they have a right to participate in the questions before the association to the end that real cooperation may result.

PERSONNEL AND EMPLOYMENT PROBLEMS.[1]

An extended consideration of employment problems is included in the May issue of the Annals of the American Academy of Political and Social Science which is devoted entirely to personnel and employment problems in industrial management. Six of the papers read at the Minneapolis employment managers' conference[2] are reproduced together with 26 other articles, all of which are presented under five general heads: (1) The place of the human element in industrial management; (2) The functionalized employment department; (3) Unnecessary hiring and firing of employees; (4) The securing, selection, and assigning of employees; and (5) The employee at work.

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[1] Annals of the American Academy of Political and Social Science, May, 1916. Personnel and employment problems. Philadelphia, 1916. 326 pp.

[2] See page 17.

Attention to the human problems of labor has emphasized the need for the development of a science of employment and personnel management; and out of this need have grown, in recent years, several employment managers' associations offering an opportunity for personnel executives to discuss their common problems, to the end that some of the wastes experienced by both employers and employees may be eliminated and the personnel function raised to its proper place in industrial management. The working program of such an organization in Boston is outlined. Its objects as set forth in its constitution are as follows:

1. To discuss problems of employees; their training and efficiency.
2. To compare experiences which shall throw light on failures and successes in conducting the employment department.
3. To invite experts or other persons who have knowledge of the best methods or experiments for ascertaining the qualifications of employees, and providing for their advancement; and more particularly to study the questions connected with the most effective employment of young people.

The importance of considerations affecting the interests of the personnel is more and more being recognized, and employing concerns are increasingly establishing functionalized employment departments to exercise supervision over all questions touching employees, including the establishment of permanent relationships with the sources of supply, and frequent suggestions of ways of improving them; the careful selection of workers and the scientific fitting of them to their jobs; the stabilization of the working force and the regularization of employment; attention to the physical examination of new and old employees as well as questions dealing with physical conditions in the plant and at the homes of the workers; the following up of the employee after he is at work; the increase of his efficiency by adequate training systems, and the supervision of the system of promotions; the inauguration of plans of profit sharing; and the conducting of social-service work and group activities of employees. "Out of the labors of such an employment department improved industrial relationships should grow, to the mutual advantage of employer and employee."

The greatest business problem to-day appears to be the human problem of labor and the wise handling of men, and failure to meet this problem results in part-time work, characterized as "extravagantly wasteful," and a high labor turnover, brought about by seasonal fluctuations, wrong selection of employees, arbitrary dismissals, unsatisfactory wages and hours of labor, failure to develop employees' fitness, lack of standardization and separation of jobs, little or no attention to welfare considerations, and wrong personal methods of handling employees. To avoid these errors of management a highly efficient employment executive is necessary.

The functionalized employment department has been established upon the application of the same reasoning to finding and maintaining the labor supply that has already been applied in industry to the problems of building, equipment, mechanical supervision, and the methods by which business is dispatched. It should be in direct contact with the topmost management of the organization, should cultivate sympathetic knowledge of the opinions of workers and communicate these to the management, and should make a survey of the requirements in the factory so as to show such facts as preferred sources of supply for new employees, education or special training required, any special attributes desired, initial wages paid, opportunities for advancement in position and possible wage increases, working conditions and working hours, and labor turnover. A study of this last item is particularly urged. The successful employment department depends to a large extent on its cooperation with other functionalized departments of the concern.

The question of personnel must ultimately be considered the real problem of management. Two establishments operating under identically the same conditions may achieve different results wholly because of difference in the quality of their personnel. The quality and quantity of the output of an organization are increased by increasing the quality and quantity of the output of the individual worker, and this may be effected by developing and prescribing tools with regard to their suitability for the purpose of individual accomplishment and by proper handling of materials and the installation of methods developed under scientific management. "Scientific management will not have completed its mission when it has determined in each industry the best method of handling materials and equipment in relation to workers, but when it has determined also the principles which underly correct methods of handling men."

The functions of an employment manager are:

> To sustain a service department for the executives, an advisory bureau for the employees; to fill vacancies with the minimum loss of time and with the maximum satisfaction to executives; and to secure for those vacancies only those who will become permanent employees; to transfer those employees not needed in one department to fill vacancies where pressure is great; to help to maintain a contented, permanent working force.

It is very important that the employment manager should exercise great care in the selection of employees because of the economic waste occasioned in the hiring and training of new workers to take the places of those who leave the organization on account of dissatisfaction or of unsuitability for the work they are given to do. There are certain factors which contribute to the cost of hiring and training new employees:

1. Necessary clerical work in connection with the hiring process.
2. Instruction of new employees by foreman and assistants.
3. Increased wear and tear of machinery and tools by new employees.
4. Reduced rate of production during the early period of employment, and increased amount of spoiled work by new employees.

It is possible to eliminate to a large extent this economic waste:

1. A thorough study of current employment statistics, with a careful analysis of the reasons for the discharge of employees, is needed in order to furnish a fact basis of local as well as general conditions on which to predicate future action.
2. High-grade men must be placed in charge of hiring departments and must be given adequate authority.
3. Proper methods must be devised for taking care of new employees, not only in respect to their technical training and work, but also in reference to their personal characteristics.
4. Effective systems of apprenticeship for boys and girls and of specialized training courses for adult employees must be maintained.
5. Well-directed efforts should be made so to regulate commercial requirements as to secure a fairly uniform production throughout the year.

In order further to reduce or eliminate this economic waste, it is necessary to establish permanent contact with the sources of labor supply; that is, employment departments must concern themselves not only with the laborer after he comes into the plant, but must give attention to the sources from which it may expect to recruit workers, by cooperating with the various schools and colleges and employment bureaus. It is also possible to organize a source of labor supply within the plant itself, and this is being done in some instances. It is important that written specifications for hiring be adopted in order to define and describe men and jobs and their mutual relation, thus bringing about a working basis of common agreement and understanding among the directly interested personnel of the organization. An employee should be selected as a result of a series of examinations to determine his physical condition, his native intellectual ability, and his technical ability.

That it is possible to determine in advance whether or not a student has a reasonable chance for success in any particular calling is maintained in an article on mental tests in vocational guidance in which it is shown that the psychologist can render valuable assistance to school authorities by the examination of individual students for the diagnosis of their mental equipment, and their personal abilities and disabilities of mind.

The value of physical examinations of employees is suggested as a means of developing individual and collective efficiency, and the results achieved in this connection by one large department store are narrated. Another way to secure efficiency is by a policy of cultivating the good will of employees through close personal relations and mutual understanding. Then, too, employees should be provided by the company with some form of definite training to fit them for the requirements of the particular business; such training may be expected to stimulate and aid efforts for the more careful analysis of work and employees for that work, to serve as a point of contact between public and cooperative interests in all grades of education, to reduce labor turnover, and to be a most important factor in the advancement of democracy in industry. This democracy, which fosters a disposition to respect the opinions and human worth of other people, particularly those less fortunate, is considered an important factor in industrial efficiency, and it is believed that after the war in Europe the trend toward democracy in government and industrial systems will be definite and perhaps irresistible.

It is highly important for industries to make American citizenship their immediate responsibility, and to eliminate citizenship tolls by the adoption of methods which will conserve workmen and stabilize the labor market. This can not be done by legislation, but must be accomplished by the establishment, in each industry, of an employment department, which will know its men and place them effectively throughout the plant, supplementing this policy with a fair system of promotion and transfer based on efficiency records. The labor supply may be stabilized also by the extension of insurance to include accidents, industrial diseases, health, sickness, and service annuities.

In connection with an adequate scheme of promotion, which is deemed necessary to hold employees in an organization, a plan is outlined which considers each man as occupying three positions, (1) the position he last occupied, wherein he was a teacher of others, (2) the position he is at present occupying, where he is actually in charge of the work and is also a teacher of the men next below him, and (3) the position he will next occupy, where he is to be a learner instructed in the duties of the position immediately above.

Some consideration is given to the subject of the effect upon workers of motion study which also implies fatigue study, and it is claimed that motion study "benefits employee as it does employer, as it does all those actively engaged in working under or interested in it, in that it makes 'to do' mean 'to be interested,' and to be interested means to be more efficient, more prosperous, and more happy."

One important element in industrial efficiency is the home conditions of the workers, which must be carefully considered by any establishment in training and educating and developing its young workers with a view to maintaining health and prosperity among them. The fundamental factors of home influence are physical, mental, and moral, and it is important that industry should interest itself in the maintenance of high standards along these lines if its employees are to render the most efficient service.

"Steady employment," the supplement to this publication, is a revision of a report of an investigation originally published by the Philadelphia department of public works. This report was summarized in the March issue of the REVIEW, page 26.

STRIKES AND LOCKOUTS, JANUARY TO JUNE, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months January to June, 1916, inclusive, was 1,719. The number similarly compiled during the first six months of the calendar year 1915 was 487.

The following table shows the number of strikes and lockouts begun in each of the months of January to June, 1916, inclusive, together with 141 strikes and lockouts reported as having occurred during the period, although the month in which they began was not reported. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO JUNE, 1916, INCLUSIVE.

Kind of dispute.	January.	February.	March.	April.	May.	June.	Month not stated.	Total.
Strikes	151	157	215	317	478	201	133	1,652
Lockouts	8	5	8	11	15	12	8	67
Total	159	162	223	328	493	213	141	1,719

The column for June includes disputes that began in that month only. During this month 152 other disputes were reported which either began in preceding months or the date of beginning was not given. These disputes have been placed in the columns in which they belong. More detailed accounts of the disputes reported for each month preceding June may be found in former numbers of the REVIEW.

DISPUTES REPORTED DURING JUNE, 1916.

The number of strikes during June shows a marked decrease from that during the preceding three months. With the exception of the strike of the longshoremen on the Pacific coast and the strikes of the bay and river steamboatmen in San Francisco Bay and vicinity and on the Columbia River which lasted practically throughout the month and in which upwards of 12,000 men were involved, the strikes were local in character and were devoid of general interest. The series of coal strikes which began in May, relative to the interpretation of the eight-hour clause in the recently-made contracts, continued into June, but seems now to have come to an end, having generally been settled by the adoption of compromise measures. The other more important strikes have been in the iron mines on the Mesaba Range, Minn.; strikes of machinists in Denver, Cincinnati, Hamilton (Ohio), Newark, and New York City; shipbuilders in Baltimore, Md., and Wilmington, Del.; all workingmen in Butte, Mont.; shingle weavers in Washington; longshoremen in Boston and Buffalo; laborers in Boston, Providence, and Kansas City; teamsters in New York City, Cincinnati, and Minneapolis; and street railway men in southeastern Connecticut. The cloak makers' strike in New York City continued throughout the month and the long-continued strike of Stetson hatters came to an end.

The data in the following tables relate to 365 strikes and lockouts concerning which information was received by the bureau during the month of June. These include, in addition to the 201 strikes and 12 lockouts which began in June, 143 strikes and 9 lockouts which were reported during the month, but began as follows: 82 strikes and 7 lockouts in May, 22 strikes and 1 lockout in April, 6 strikes in March, 1 strike in February, and 32 strikes and 1 lockout the dates of commencement of which were not reported, but most of which probably occurred in May or June. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for June will show an increase over the number of strikes herein reported for that month.

Of the disputes reported during June, 12 strikes occurred east of the Mississippi and south of the Ohio and Potomac Rivers, 58 strikes and 4 lockouts west of the Mississippi, and the remaining 274 strikes and 17 lockouts in the district north of the Ohio and Potomac Rivers and east of the Mississippi. More than one-half of these strikes occurred in four States.

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS WERE REPORTED DURING JUNE, 1916.

State.	Strikes.	Lockouts.	Total.
Pennsylvania	55	1	56
New York	52	1	53
Massachusetts	35	4	39
Ohio	35	1	36
New Jersey	23	1	24
Washington	15	....	15
Illinois	13	2	15
Michigan	10	2	12
Connecticut	9	....	9
Rhode Island	9	....	9
California	8	....	8
Indiana	6	2	8
Minnesota	6	1	7
Missouri	5	2	7
Iowa	6	....	6
West Virginia	6	....	6
Maryland	5	1	6
Oregon	5	1	6
Colorado	5	....	5
Wisconsin	5	....	5
15 States	31	2	33
Total	344	21	365

Six strikes and 1 lockout were confined to women; 7 strikes and 1 lockout included both men and women; in 19 strikes and 1 lockout the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING JUNE, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades	67	3	70
Building trades	49	3	52
Mining	48	....	48
Bakers	12	2	14
Laborers	15	2	17
Clothing industries	12	....	12
Woodworkers	12	....	12
Teamsters	11	1	12
Textile workers	10	1	11
Quarrying and stone working	10	....	10
Glassworkers	8	....	8
Longshoremen and freight handlers	8	....	8
Street railways	6	....	6
Railroads	5	....	5
Steamboat men	5	....	5
Butchers	5	....	5
Printing and publishing	5	....	5
Cigar makers	4	1	5
Leather workers	4	....	4
Iron and steel mills	4	....	4
All others	44	8	52
Total	344	21	365

Included in the above are 30 strikes of machinists, 14 strikes and 2 lockouts of molders, and 13 strikes of carpenters; 43 of the mining strikes were in coal mines.

In 222 strikes and 17 lockouts the employees were connected with unions; in 9 strikes they were not so connected; in 4 strikes they were not connected with unions at the time of striking, but organized themselves into unions during the course of the strike; in the remaining 109 strikes and 4 lockouts it was not stated whether the strikers had union affiliations or not.

In 289 cases the causes of the strikes and lockouts were given. In nearly 80 per cent of these the question of wages or hours, or both, was a prominent one. The principal causes are shown in the following table:

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING JUNE, 1916.

Cause.	Strikes.	Lockouts.	Total.
For increase of wages	116	6	122
Because of reduction of wages	2	1	3
For decrease of hours	24	1	25
For increase of wages and decrease of hours	44	....	44
General conditions	3	....	3
Conditions and wages	5	....	5
Conditions and hours	1	....	1
Conditions, wages, and hours	4	....	4
Recognition and closed shop	10	4	14
Recognition and wages	6	....	6
Recognition and hours	4	....	4
Recognition, wages, and hours	5	1	6
Because of discharge of employees	13	....	13
Because of employment of nonunion men	9	....	9
In regard to the agreement	11	....	11
Jurisdictional	2	....	2
Sympathy	1	....	1
Miscellaneous	16	....	16
Not reported	68	8	76
Total	344	21	365

In 138 of the strikes the number of persons involved was reported to be 105,236, an average of 763 per strike. In 24 strikes, in each of which the number involved was over 1,000, the strikers numbered 81,600 persons, thus leaving 23,636 involved in the remaining 114 strikes, or an average of 207 in each. In 9 lockouts the number of employees involved was reported to be 4,639, an average of 515 per lockout. In 6 lockouts, in each of which the number involved was less than 1,000, the number was reported to be 428, or an average of 71 to each.

In 212 strikes and 16 lockouts only 1 employer was concerned in each disturbance; in 7 strikes, 2 employers; in 8 strikes and 1 lockout, 3 employers; in 12 strikes and 2 lockouts, more than 3; in 105 strikes and 2 lockouts the number of employers was not stated.

Of 71 strikes reported as ending in June, 22 were won; 12 lost; 17 compromised. In 14 the strikers returned to work under promise of the employer to arbitrate the matters in dispute; in 6 the result was not reported. The duration of 57 of these strikes was given as follows: One day, 6; 2 days, 4; 3 to 7 days, 20; 1 to 2 weeks, 14; 2 weeks to 2 months, 11; over 3 months, 2. Omitting the last two mentioned, the duration of the remaining 55 strikes was 611 days, or an average of 11 days each.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor Statistics from approximately 725 retail dealers in 44 of the principal industrial cities of the United States show that the retail price of the principal articles of food taken as a whole was the same on May 15 as on April 15, 1916.

While all meats and a number of other articles increased in price, the marked decline in the price of butter, an article heavily weighted in the consumption of workingmen's families, offset the lesser advances in other articles not so heavily weighted.

The following table shows the relative retail prices on April 15 and May 15, 1916, of 26 of the articles covered by the bureau's reports, together with the average money prices on the same dates.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON APR. 15 AND MAY 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price—		Relative price (average price for the year 1915=100)—	
		Apr. 15, 1916	May 15, 1916	Apr. 15, 1916	May 15, 1916
Sirloin steak	Pound	$0.268	$0.276	105	108
Round steak	do	.239	.218	106	109
Rib roast	do	.210	.216	105	108
Chuck roast	do	.169	.174	105	108
Plate boiling beef	do	.128	.130	105	107
Pork chops	do	.226	.230	111	113
Bacon, smoked	do	.284	.290	104	106
Ham, smoked	do	.284	.289	110	112
Lard, pure	do	.158	.169	107	114
Hens	do	.237	.241	114	116
Salmon, canned	do	.202	.202	101	101
Eggs, strictly fresh	Dozen	.268	.278	80	83
Butter, creamery	Pound	.418	.375	116	104
Cheese	do	.217	.247	107	107
Milk, fresh	Quart	.090	.090	100	100
Flour, wheat	⅛-barrel bag	.953	.953	95	95
Corn meal	Pound	.031	.031	99	99
Rice	do	.091	.091	100	100
Potatoes	Peck	.355	.360	155	157
Onions	Pound	.048	.051	138	147
Beans, navy	do	.092	.093	120	121
Prunes	do	.130	.130	98	98
Raisins, seeded	do	.127	.127	101	101
Sugar, granulated	do	.080	.086	121	130
Coffee	do	.302	.302	100	100
Tea	do	.551	.551	100	100
All articles combined				**107**	**107**

The table given below shows the average money prices and the relative prices of the same 26 articles on May 15 of each year from 1912 to 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE PRICES OF FOOD ON MAY 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of May in each year was of the average price for the year 1915.]

Article.	Unit.	Average money price May 15—					Relative price, May 15 (average for the year 1915=100)—				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.235	$0.255	$0.258	$0.255	$0.276	92	100	101	100	108
Round steak	do	.200	.221	.232	.228	.248	88	97	102	100	109
Rib roast	do	.192	.200	.202	.200	.216	96	100	101	100	108
Chuck roast	do			.169	.161	.174			105	100	108
Plate boiling beef	do			.125	.123	.130			103	101	107
Pork chops	do	.193	.209	.224	.209	.230	95	103	110	103	113
Bacon, smoked	do	.243	.273	.271	.271	.290	89	100	99	99	106
Ham, smoked	do	.240	.263	.263	.253	.289	93	102	102	98	112
Lard, pure	do	.146	.158	.155	.151	.169	99	107	105	102	114
Hens	do	.204	.223	.227	.214	.241	98	107	109	103	116
Salmon, canned	do				.200	.202				100	101
Eggs, strictly fresh	Dozen	.255	.258	.265	.258	.278	76	77	79	77	83
Butter, creamery	Pound	.367	.364	.328	.349	.375	102	101	91	97	104
Cheese	do				.233	.247				101	107
Milk, fresh	Quart	.087	.090	.090	.089	.090	97	100	100	99	100
Flour, wheat	⅛-barrel bag.	.873	.803	.793	1.114	.953	87	80	79	111	95
Corn meal	Pound	.030	.028	.030	.032	.031	95	90	95	101	99
Rice	do				.091	.091				100	100
Potatoes	Peck	.438	.236	.289	.229	.360	191	103	126	100	157
Onions	Pound				.042	.051				123	147
Beans, navy	do				.076	.093				98	121
Prunes	do				.134	.130				101	98
Raisins, seeded	do				.126	.127				100	101
Sugar, granulated	do	.063	.053	.050	.068	.086	96	81	76	103	130
Coffee	do				.302	.302				100	100
Tea	do				.551	.551				100	100
All articles combined							**96**	**95**	**96**	**98**	**107**

Comparing prices on May 15 of each year from 1912 to 1916, all articles, excepting potatoes, were higher on May 15, 1916, than on May 15, 1912. Only three articles—flour, corn meal, and prunes—were lower in price on May 15, 1916, than on the 15th of May of the previous year; three articles—rice, coffee, and tea—were the same in price; all other articles advanced during the year.

In May, 1916, food prices as a whole were 11 per cent higher than in May, 1912, and 9 per cent higher than in May, 1915. For the four years prior to 1915 May prices as a whole made little change, differing but 2 per cent between May 15, 1912, and May 15, 1915.

COST OF LIVING—STATE OF WASHINGTON.

A household budget of foodstuffs and fuels in Seattle, Wash., increased 10 per cent in 1916 over 1914, based on prices prevailing in April of each year, and 6 per cent in 1915, according to a report issued by the bureau of labor of that State.[1] The increase in Tacoma in 1916 over 1914 was 10 per cent, and in 1915, 6 per cent; and in Spokane the increase was only 1 per cent in 1916 over 1914, and less than 1 per cent (0.6 per cent) in 1915. The items in the budget included 58 different articles, which were selected after consulting with different families and investigating the average monthly accounts of numerous families. The investigation was first undertaken in 1914, and the identical budget was used in compiling the figures for 1915 and 1916.

It is perhaps regrettable that no estimate is made of the cost of living for the State as a whole. The following table gives the actual cost of the family budget used in the inquiry in the three principal cities, Seattle, Tacoma, and Spokane, and for three other divisions of the State, comprising 41 cities,, excluding the cities named. It shows both actual and relative costs on the base of 1914.

ACTUAL AND RELATIVE COST OF A HOUSEHOLD BUDGET OF 58 ARTICLES IN TERMS OF THE AVERAGE RETAIL PRICES IN APRIL OF EACH YEAR, 1914-1916.

AMOUNT.

Year.	Seattle.	Tacoma.	Spokane.	South-western.	North-western.	Eastern.
1914	$418.46	$431.57	$424.03	$405.93	$416.82	$428.94
1915	443.72	431.22	444.92	424.80	418.19	442.06
1916	461.42	437.35	463.50	424.89	435.78	453.55

RELATIVE.

Year.	Seattle.	Tacoma.	Spokane.	South-western.	North-western.	Eastern.
1914	100.00	100.00	100.00	100.00	100.00	100.00
1915	106.03	106.03	100.61	104.65	100.33	103.06
1916	110.27	110.27	101.34	104.68	104.55	105.74

THE LABOR CONTRACT AS PROPERTY.

A court decision of special interest to labor is that of the Massachusetts Supreme Court, holding that the provision of the law declaring that the right to make contracts for labor is not property was a violation of the provisions of the fourteenth amendment to the Federal Constitution.

The law in question is chapter 778 of the Acts of 1914 of the Massachusetts Legislature, which declared the legality of agreements or associations of workingmen for the betterment of conditions, and forbade the issue of injunctions in cases of labor disputes unless to prevent irreparable injury to property or a property right of the applicant, for which no adequate remedy at law exists. Section 2 provided that in construing the act the right to enter or change the relation of employer and employee or to do work and labor as an employee should be held to be a personal and not a property right, and that no injunction should issue in cases involving the breach of a contract of employment where no irreparable damage to property was about to be committed, the parties being left to their remedy at law. The third section forbade the indictment or prosecution of any person for entering into any agreement or combination for the betterment of employment conditions, or for doing any act in pursuance of such agreement, unless the act was in itself unlawful.

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[1] State of Washington. Comparative statistics on foodstuffs and fuel for three years as shown in a budget of the annual cost of living of a family of five persons, based on prices prevailing in April of each year. April, 1916. Compiled by the State Bureau of Labor. Olympia. [1916. 3 pp.]

The constitutionality of this act was challenged in a case (Bogni *v.* Perotti, 112 N. E., 853) decided by the Supreme Court of Massachusetts on May 20, 1916, in which the plaintiff and his associates, members of a labor organization, sought an injunction to prevent the defendant and his associates, members of a rival labor association, from interfering unlawfully with the employment of the former. Facts appeared that would, under the practice in the State, warrant the issue of an injunction, but the defendants set up the statute above described as a bar to the issue of any injunction in the circumstances of such a dispute. The court, in holding that the provision of the law declaring that the right to make contracts for labor is not property, was a violation of the provisions of the fourteenth amendment to the Federal Constitution, quoted decisions of its own, of the Supreme Court of Vermont, and of the Supreme Court of the United States, to the effect that the right of personal liberty and the right of property guaranteed by the Constitution include the right to make contracts for the purchase and sale of labor; and that the right to exchange labor and services for money is one of the chief rights of personal liberty and private property.

It was further held that the act would deprive workmen seeking the protection of the law, as were the plaintiffs in the present case, of an equal status with other suitors whose property was of a different nature. "That a man can not resort to equity respecting his property right to work in the ordinary case, simply because he is a laboring man, and that he can not have the benefit of an injunction when such remedies are open freely to owners of other kinds of property, needs scarcely more than a statement to demonstrate that such a man is not guarded in his property rights under the law to the same extent as others."

The legality of the association of workingmen for the purposes mentioned in the statute was recognized, the law adding nothing to the doctrine already established by numerous decisions of the State courts. It was also pointed out that "It is an elementary principle of equity that an injunction never is issued except to prevent irreparable injury;" adding that "If the statute means anything more than this, there would be other difficulties about its construction that need not now be elaborated." For the defects of the second section, therefore, the statute as a whole was held to be unconstitutional.

Special interest attaches to this decision for the reason that the statute in question is of a form whose adoption has been widely urged by organized labor, the declaration that "The labor of a human being is not a commodity or article of commerce," being contained in an act of Congress (ch. 323, Acts of 1914); while other provisions of the same act of Congress and certain provisions of chapter 233, Acts of 1913, of the Legislature of Kansas, resemble other portions of the Massachusetts statute. Similar enactments are being urged in other States. Granting, as has been said, that a workingman's "value in the economic world depends upon labor power or power to produce," it is evident that the mode of its classification and protection is of the first importance, and this finding of constitutional rather than of statutory control, citing as it does the highest court of the land as authority, gives to this Massachusetts decision an unusual significance.

LABOR LEGISLATION OF MASSACHUSETTS IN 1916.

At its session of the current year the Legislature of the State of Massachusetts continued its policy of perfecting and extending the laws affecting the conditions of employment in the State. Many of the enactments were of minor significance, effecting slight changes in the existing laws.

Of importance in connection with the law providing for compensation of injured workmen was the reduction of the waiting time for the commencement of compensation payments from 2 weeks to 10 days. Another act declared the equality in all respects of all mutual liability companies authorized to do business in the State with the Massachusetts Employees Insurance Association, which was created by a special provision of law for the purpose of writing compensation insurance.

The compensation law of this State is administered by an industrial accident board of five members; there is also in the State a body of a like number of persons known as the State board of labor and industries, whose duty it is to appoint the commissioner of labor, to investigate industrial conditions within the State with a view to industrial development and the improvement of industrial conditions, to enforce labor laws, etc. By an act of 1913 these bodies, sitting jointly, were directed to investigate employments and places of employment within the State and decide upon and prescribe reasonable means and requirements for the prevention of accidents and industrial diseases. In a message of April 21 of the current year the governor of the State, among other matters, called attention to this act, saying that "The operations of this joint board have not proved effective in any material degree." The reasons for this failure are briefly considered, and a recommendation made that the powers and duties of the joint board be transferred to the industrial accident board, which should be authorized to appoint a special deputy for the specific ends contemplated by the act. An act was passed subsequent to this recommendation, but instead of conferring the powers of the joint board upon the industrial accident board they were transferred to the State board of labor and industries, thus taking out of the hands of the board which administers compensation for accidents the power of determining and prescribing safety provisions—a movement in the opposite direction from that taken by the considerable number of States which have regarded it as desirable that accident compensation and accident prevention should be closely correlated.

New legislation is contemplated in resolves directing the State board of labor and industries to investigate the hours and conditions of labor in hotels and restaurants, having in view the desirability of a law providing one day's rest in seven; directing the board of education to investigate the subject of giving special training to injured persons for the purpose of reestablishing or increasing their ability to earn a livelihood; and providing for the appointment of a special recess commission on social insurance,[1] which is to give special attention to the effect of sickness, unemployment, and old age in the State, and recommend such legislation as might seem practical and expedient to secure relief from the burdens produced by these causes. An additional duty was assigned to this commission by a subsequent resolve—that of studying and investigating the subject of reasonable restrictions in the hours of labor in industries operated continuously for 24 hours, with recommendations for legislation.

"INDUSTRIAL NECESSITY" FOR POLITICAL CONTROL: AN INCIDENT OF THE COLORADO MINERS' STRIKE.

A recent decision of the supreme court of Colorado settled a number of election contests growing out of the general election in Huerfano County of that State, November, 1914. The offices of sheriff, county clerk and recorder, county commissioner, and city assessor were involved, and as the facts were identical in these cases they were consolidated and decided with a single hearing. The decision of the county court had been adverse to the contestants, and the matter was brought to the supreme court on writ of error. E. L. Neelley was the plaintiff against J. D. Farr, holding the office of sheriff, and the facts which developed in this particular contest are sufficient for consideration as representative of the whole group. The following is a summary of the findings of the court and of the evidence on which such findings were based:

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[1] The commission consists of Senators Farnsworth and McLane, Representatives Bowser, Catheron, Medill, and Morris, and three persons appointed by the governor, Mr. J. P. Meade, Miss Edna Spencer, and Wendell P. Thoré.

Farr had been sheriff for a number of years, and it was charged that by combining with the other officers of the county and certain corporations engaged in coal mining therein he had been able to control and did control the government of the county and the processes of election so as to corrupt the ballot and thwart the will of the qualified electors. For a considerable time prior to the election in 1914 a strike of the coal miners of the locality had been in existence, with rioting and violence, succeeded by the occupation of the territory by Federal troops. Not long before the election voting precincts were created, the boundaries of which were identical or practically identical with the boundaries of what were known as "closed camps," which were areas owned and controlled entirely by various mining corporations, from which it was testified all persons were excluded unless by permission of the officials of the mining companies. In other cases the voting precincts were so arranged as to make it necessary for qualified voters to go a great distance (18 to 20 miles) to cast their votes. Intimidation and the illegal voting of unqualified persons were also charged. In the precincts at the closed camps the apparent majority of Farr was 631, while in the entire county he had a plurality of 329 votes. Excluding the closed precincts Neelley had a majority of 302 votes. The situation as to the other contestants was identical except for the number of votes in different cases.

It was in evidence that the political party in power was employed by the mining companies, of which the Colorado Fuel & Iron Co. and the Victor Fuel Co. were the principal ones, to maintain a control over local affairs such as the companies conceived to be favorable to their interests. The issue before the people at the time of the election was said to be a single one—the strike, and the candidates of the dominant party ran on what was called a "law and order" platform, which was generally understood to mean opposition to the strikers. In the effort to secure the election of "law and order" nominees the precincts were made coterminous with the closed camps as above indicated, these being in some cases protected by fences and in all cases by armed guards. It followed, almost without exception, that the only residents of these precincts were the employees of the coal companies, and that the judges, clerks, and officers of election were also their employees. "The polling places were upon the grounds and in the buildings of these companies; the registration lists were kept within the private offices and buildings of these companies, and used and treated as their private property." Not only were organizers and "agitators" excluded from these camps but merchants, delivery men, and even friends and acquaintances were either absolutely debarred or required to get permits either from the mine officials or from Farr, the sheriff. Political meetings were made impossible, and the examination of registration lists was either prevented or so nearly so that no effective inspection was made. "Thus were the public election districts and the public election machinery turned over to the absolute domination and imperial control of private coal corporations and used by them as absolutely and privately as were their mines to and for their own private purposes, and upon which public territory no man might enter for either public or private purposes, except with the express permission of these private corporations."

A considerable amount of other evidence was cited and the conclusions reached were said by the court to be "based upon admitted or substantially undisputed testimony." The testimony as to coercion and intimidation was not discussed, the court saying that it was voluminous, and that there was dispute concerning it. One point dwelt upon was the furnishing of an identifying card by means of which illiterate voters were enabled to vote as the companies desired, the court saying that the result "was not an expression of opinion or judgment, not an intelligent exercise of suffrage, but plainly a dictated coal company vote. * * * No more fraudulent and infamous prostitution of the ballot is conceivable."

The defense contended that the closed precincts were an "industrial necessity," so that the conduct of the coal companies during the campaign was justified. As to this the court said that however justifiable the control of private property might be in its private operation, there was no justification when the territory was dedicated to a public use. "The plain purpose of the formation of the new precincts was that the coal companies might have opportunity to control and conduct the elections therein, just as such elections were conducted."

The findings of fraud and illegal practices were such that a majority of the court held that the vote of the closed precincts should be thrown entirely out of the count, and the election decided by the results in the other precincts of the county. From this it followed that the contestants were ordered installed in the respective offices upon qualification as required by law. Four judges concurred in this conclusion, one had not heard the oral argument and took no part in the decision, and two dissented.

CHILD LABOR IN MARYLAND, 1915.

The Twenty-fourth Annual Report[1] of the Bureau of Statistics and Information of Maryland just issued is almost wholly devoted to an account of the extent of child labor in Maryland and the administration of the laws designed to protect it. Only a small part of the bureau's duties are devoted to factory inspection in general, as the protective labor code of Maryland is very largely a child-labor code. The report under review is made up of a series of somewhat disconnected parts. The nature of its scope may be inferred from its contents: General summary and introduction; retrospect of three years' work; the bureau's stewardship during 1915; contribution of the children of Baltimore to the world's work of 1915; why children seek new jobs; report of city medical examiners; newsboys and other street traders; stage children; control of children in western Maryland; issuance of employment certificates in the counties other than in western Maryland; the bureau inspection during 1915; child-labor inspection on the Eastern Shore of Maryland; factory inspection in Baltimore City; strikes; efforts to establish a labor exchange; and financial statement.

Maryland has over 155,000 children between the ages of 10 and 16 years, 18 per cent of whom are gainfully employed. Under the law the State has exercised supervision over the working environment of 10 out of every 18 at work. The welfare of the other 8 engaged mainly in agriculture, animal husbandry and domestic service, is intrusted to parental feeling and public sentiment, declares the bureau.

The administration of the child-labor law of Maryland cost that State $17,618 during 1915, $11,965 of which was expended for salaries. This does not include the printing of the annual report which cost approximately $1,300. According to the report—

> For three and a half years Maryland has had, barring exceptions, a good child-labor law. Save for these exceptions the law is the State's bill of rights for the child, fully protecting his claim to exemption from service in the ranks of wage earners, and his title to schooling up to 14 years of age and through the fifth grade. The law raises into plain view Maryland's ideal of social responsibility for the child, but the exemptions mark with equal clearness the extent to which the State has fallen below its own ideals.

The arguments generally advanced in support of these exemptions are, according to the report, that the earnings of child wage earners contributed to the family are necessary for the needs of the family; that wage earning has educational value; and that the industry needs the child's recreation and play hours.

By inference the report answers the argument of the educational value of work by pointing out the defective schooling of many of

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[1] Twenty-fourth Annual Report of the Bureau of Statistics and Information of Maryland, 1915. Baltimore, 1916. 235 pp.

Maryland's working children under 14 years of age. "There are concrete evidences that, aided by the vacation permits, some parents are robbing their children of all schooling. * * * More important than the child's right to an education," the report declares, further, "is his claim upon the State for protection against injury to his health, whether in school, at home, at work, or at play."

In this connection there is emphasized the need of extending the list of so-called hazardous employments in which children have been employed under the Maryland law. Thus, children working in the clothing industry rank third in number employed. This industry, nevertheless, accounts for nearly 50 per cent of minor injuries to children, although employing less than a fifth of all children in industry. During the year ending November 1, 1915, the State industrial accident commission passed upon 22 cases of claims for injuries to children under 16 years of age.

> In some cases these injuries were so serious as to result in amputations. The industries which employ four-fifths of the children report about one-half of the serious accidents. The fact that a number of injuries were sustained while the boys were working strictly in accordance with the terms of the permit is a final and compelling proof of the need of carefully scrutinizing the working environment of Maryland's bread-winning children and making a discriminating classification of occupations on the basis of the physical demands which they make, in order to insure to the children full protection from the hazards of industry during the State's period of guardianship.

The problem of child labor in Maryland being very largely associated with the city of Baltimore, the bureau gives figures that throw light on the extent of child labor in that city. During the year the bureau considered 15,907 applications for permits to work, or approximately an average of 52 for every working day. Out of this mass of applications 2,248 permits for street trade were issued, the largest number in any single trade. Permits were refused to 1,159 applicants, 382 permits were temporarily withheld, and 746 failed to follow up their applications. In the progress of issuing these permits certain facts were learned concerning the child wage earners of Baltimore. Data concerning 7,141 individuals to whom were granted original general and vacation permits, and street trade and stage permits, showed that 5,102, or 71 per cent were born in Baltimore, while the next largest proportion, 907, or 13 per cent, were foreign born. Excluding those granted stage permits (53 in number), 51 per cent were American white, 17 per cent Hebrew, while no other nationality numbered as much as one-half of those of Hebrew parentage.

It appears, the report continues, that there is evidence some progress has been made in efforts to impress upon the public the inadvisability of allowing young children to become wage earners. Thus the number of general permits granted in 1913 declined from 6,571 to 3,252 during 1915, while vacation permits declined from 2,546 to 1,588.

The report also notes gratifying results in the matter of the increased educational qualifications of child wage earners entering industry. Recently employment certificates have been refused to those who have not completed the fifth grade. In 1913 only 42 per cent of the children entering industry and engaging in street trade had finished grades above the fifth; in 1914, this group represented 55 per cent of the total, and in 1915, 61 per cent. The low percentages noted are undoubtedly due to the fact that children 10 years of age may engage in selling newspapers, and, of course, have not completed the fifth grade. "Jobs are always to be had," the report comments, further, "and serve to draw the children away from school. It remains, therefore, for the schools to offer advantages which will offset the lure of industry."

The bureau points out of what this lure of industry consists. The largest group go to work as the result of financial need. The second largest group go to work, inspired by real ambition to learn a trade or to secure business training, but a large number, it is stated, look merely for a means of escaping irksome school duties, or merely follow blindly the example of other schoolmates.

Referring to the fact that children enter industry by reason of the financial needs of their families, the report remarks that, if the 15,000 child wage earners were to be withdrawn from industry, it is not unreasonable to believe that a slight increase in the wages of their elders would result, more than offsetting the small earnings of the children.

It may be stated, as a fairly well-known fact, that there is a great deal of shifting from job to job on the part of child wage earners. The cause of this was sought by the bureau. An examination of the reasons for leaving former jobs, as given by 3,854 children to whom permits were issued, showed the following: Services no longer needed (31.1 per cent of all instances); low wages (16.7 per cent); excessive physical demands in the industry (16.7 per cent); dislike of the work or place (9.8 per cent); other reasons or reasons not reported (25.7 per cent).

Commenting on the fact that approximately one-third left the industry because of not being needed, the bureau remarks:

> The seriousness of this situation as reflecting the irregularity of employment is manifest when it is understood that all of these children were working on general employment certificates. In other words, they had entered industry permanently and were in the market for steady jobs.

Those industries in which this irregularity of employment effected the greatest number were found to be, in order, as follows: Canning; bottle stopper; artificial flower; straw hat; confectionery; mercantile;

copper, tin, and sheet iron; printing; glass; paper box. Those employments which it was claimed had forced out children because of the excessive physical demand were, in order, as follows: Wooden box; glass; confectionery; straw hat; copper, tin, and sheet iron; office; clothing: textile; mercantile; telegraph and telephone.

Undersize and underweight were the chief factors in excluding boys from industry, according to the report of the medical examiner who passed upon the applications of 5,863. Of all specific defects causing a refusal of permit, the most important was that of carious teeth; enlarged tonsils and adenoids were the next most frequent imperfection. The female medical inspector, who made 4,463 examinations, reported that eye diseases and defects of vision ranked first in number, causing a refusal of permit. Diseased tonsils and adenoids ranked next in number.

Of the occupations which child wage earners enter, one of the most common, probably, is newspaper selling; but the report also finds this to be the trade most productive of truancy from school and of juvenile delinquency. Twelve and one-half per cent of Baltimore newsboys are to be found on the docket of the juvenile court; 95 per cent of the school children admitted to the parental school for repeated truancy have been newsboys or street traders; and 43 per cent of the children at the Maryland Industrial School (a reform school) have been engaged in some street trade.

The average weekly income of 1,342 newsboys in Baltimore reporting was $1.35 per week, the highest being $1.80 and the minimum $1.15.

The number of children granted certificates in Baltimore for employment on the stage, although not large in comparison with the total number in industry, increased during 1915. There were 76 applications for permits for stage work, 70 of which were granted and 6 refused, against 44 in 1914, 37 granted and 7 refused. The 76 applications in 1915 were for 28 different shows. The age of applicants ranged from 3 to 15 years, the largest single proportion, or 20 per cent, being 10 years of age.

Turning to the employment of children in parts of the State other than Baltimore, it is noted that the difficulty of inspection is somewhat greater by reason of the extent of territory to be covered and the seasonal character of the canning industry in which is employed the largest proportion of child wage earners outside of the city of Baltimore.

What may be termed the second half of the report under review is devoted to the inspection work of the bureau. For the work of the bureau is twofold, first, oversight of the admission of children into industry through the issuance of permits after examination of the child's physical, educational, and age qualifications, and second, the following up of the child by frequent inspection after his admission into the ranks of industry.

The staff of eight members had subject to its supervision during 1915, 15,194 children; in 1914, 16,147; and in 1913, 10,914. These are the children in the State at the end of each year since December 1, 1912, who have been licensed to work.

Even after a license to work has been issued, inspection of the work of the children continues. The total number reported through inspection in 1915 was 7,350; 2,000 by the inspector assigned to the Eastern Shore; 1,000 by the inspector in the clothing and tobacco industries; 350 by the inspector in western Maryland; and 4,000 by the inspectors in Baltimore (including some canning districts outside of the city). Of the 4,000 last named, about 3,000 worked in the city. Since there are 6,000 licensed child workers in Baltimore alone, therefore, as only 3,000 were reported by inspection, the work of the four inspectors in this district in 1915 fell 50 per cent short of their task.

During the year the bureau found 1,463 violations of the child-labor law, of which 905 were found in Baltimore City and 558 in the counties. The most common violation was that of employing a child without a permit (1,063 instances, or 73 per cent, of the total reported). The next largest proportion of violations consisted in returning the permit to the child instead of to the bureau (290 instances, or 2 per cent). All of these latter instances were found in Baltimore City, as were also the largest proportion (62 per cent) of all violations. Seventy-one cases were noted of employment below the legal age, of which 41, or 58 per cent, were found in the counties outside of Baltimore.

Instances are cited to show the cunning attempts on the part of parents to falsify birth certificates.

As to the administration of the law, the report emphasizes repeatedly the difficulty of proper enforcement because of political interference in the appointment of the staff, resulting in lack of technical qualifications and indifference to the duties imposed by the law; difficulty in securing competent proof of age by reason of obstacles presented by foreign applicants for permits, "by the passive attitude of the public, the puzzled reluctance of parents, the impatient opposition of employers, and by the active and insidious political influence which manifested itself at every turn," and finally the difficulties imposed by the existence of numerous exceptions in the existing law. The inspectors themselves should not be held entirely to blame for this, the report notes, but rather the spoils system as a whole of which they are merely a part. And on the whole matter of political meddling in the inspection department, the bureau quotes from its report of 1914, as follows:

> Unprotected by civil service or any other system that insures not only tenure of office, but moral support in the discharge of duties, the administration of the law is constantly exposed to quiet but positive political pressure, often quite indirect. * * * The public attitude toward the law is largely passive, and such active interest as exists takes the form either of seeking jobs or of securing exemption both in the issuance of employment certificates and in the administration of other provisions of the law. The ordinary citizen does not so much expect his representative or any other public official to discharge specific duties, as he expects to secure through him favors and exemptions; the denial of these, whether direct or through another official whose aid has been enlisted, results, and more often threatens to result, in attacks on those sections of the law which afford the child legal protection. * * * A superficial consideration of the obstacles in the way of protecting children in industry leads generally "to the greed and ignorance of employers and parents." These, however, are insignificant compared with interference of politically minded persons who seek on every hand to nullify the intent of the law.

A new child-labor law went into effect in Maryland on June 1, 1916, after the publication of the bureau's report. This law very largely rewrites the former one, making some changes also in the method of administration, particularly in the issuance of employment certificates. The bureau of statistics and information is converted into a board of labor and statistics, at the head of which are a chairman and two advisory commissioners. The new law embodies a principle of child-labor legislation long contended for by advocates of child-labor reform, by prescribing a flat minimum age of employment in all manufacturing, mercantile, and mechanical industries, excepting only canneries and newspaper selling. In the two last-named industries the minimum age is 12 years. The law limits the working hours of all children under 16 to 8 a day (between 7 a. m. and 7 p. m.) and to 48 hours a week. Children under 16 are withdrawn from the stage, theaters, moving-picture establishments, tobacco factories, and from the operation of cross-cut saws, slashers, or any power machinery. The striking out of the exemptions as to the above-mentioned industries may be expected to remedy some of the bad conditions spoken of in the report.

MINER'S NYSTAGMUS IN THE UNITED STATES.

Miner's nystagmus as an occupational disease has received but scant attention in this country. In fact, no thorough investigation to disclose its prevalence has been made, so that, although it is known to exist, no definite information is available as to the extent to which the industry is affected by this disease. In a bulletin recently issued by the United States Bureau of Mines this subject is treated from the standpoint of European experience, particularly that of England and Germany, where nystagmus appears to be so common as to merit recognition among occupational diseases for which compensation is paid.[1]

Two views are advanced as to the cause of miner's nystagmus. "One attributes it to eyestrain due to working in a badly lighted space with black light-absorbing surfaces; the other to strain of the extrinsic muscles of the eye, especially of the elevator muscles, due to the position of the miner when at work at the coal face or when examining the roof of the workings to detect gas or threatening falls." The symptoms are described as follows:

> There are usually objects dancing before the eye. There is oscillation of the eyeball, headache is often present, and giddiness sometimes causes the miner to stumble. The movements of the eyeballs are rotary and to and fro, rarely vertical; the rapidity of the motion may be great. Tremors of the muscles of the head and face are often associated with the trouble.[2]
>
> There are two distinct varieties of the disease. In the first the symptoms are absent or latent, and the man, suffering no disability, is unaware that he has nystagmus; in the second the disease is manifest and the man is more or less incapacitated, and aware that his eyes are affected.[3]

Among the English authorities quoted the consensus of opinion appears to be that eyestrain due to deficient light is the chief cause of this disease, and the observation is made by one writer that nystagmus was first described at the time when the Davy lamp was introduced, and that since the enforcement by law of the use of safety lamps the frequency of nystagmus has shown a marked increase. Furthermore, it is pointed out that nystagmus does not occur in metalliferous mines and rarely in coal mines where candles are used. As shown by English experience, the malady as a rule does not affect workers under 30 years of age and rarely until after 10 years of work. Recovery may be expected, on cessation from pit work, in three to twelve months time, although work not involving this peculiar eyestrain may be undertaken long before the expiration of this time.

It is possible to prevent miner's nystagmus. In the opinion of two English authors[4] quoted in the report under review, prevention resolves itself into periodical medical examination of all underground workers for the presence of refraction errors, for any signs of incipient nystagmus, and for physical or nervous debility. They emphasize the importance of adequate light, and express the opinion that if electric lights were installed in all working places in collieries, or if electric lamps capable of giving light for at least eight hours were supplied to all underground workers miner's nystagmus would soon be unknown, and serious accidents to workmen, and consequent loss to the employer, would much more rarely occur. "They overlooked the fact that electric light can not be used in gaseous mines for the essential purpose of determining the presence of fire damp." The only curative treatment prescribed by these authors is rest, the use of strychnine, and the correction of refraction errors. "However, the correction of refraction errors would require suitable glasses, which, of course, could not be worn underground." Their conclusions are thus briefly stated:

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[1] Department of the Interior, Bureau of Mines Bulletin 93, Miners' nystagmus, by Frederick L. Hoffman. Washington, 1916. 67 pp.

[2] Barnett, H. N., Accidental injuries to workmen. London, 1909.

[3] Llewellyn, T. L., A lecture on miners' nystagmus: British Medical Journal, June 28, 1913, p. 1359.

[4] Browne, F. J., and Mackenzie, J. R., The etiology and treatment of miner's nystagmus: British Medical Journal, Oct. 5, 1912, pp. 837, 840.

> 1. There are certain important contributory factors in the production of miners' nystagmus, such as inadequate light, refractive errors, and muscular strain.
> 2. Nystagmus is a menace to the miner working underground, as it may prevent the early detection of flaws in the roof, and falls may result. An illustration of the gravity of this danger is the fact that one of our cases was a colliery examiner.
> 3. We are convinced that the preventive and remedial measures suggested would, if carried out thoroughly, soon make miners' nystagmus a very rare complaint and greatly facilitate the detection of the small blue cap which indicates the presence of fire damp.

In a lecture on miner's nystagmus by Dr. T. L. Llewellyn,[1] published in the British Medical Journal of June 28, 1913, the author presents an analysis of 600 manifest cases, found in 750 cases examined, in which he shows that movements of objects was the most frequent symptom indicated (94.3 per cent); that headache came second in order of frequency (84.5 per cent); and giddiness third (81.6 per cent); that the mean age of miners affected was 39.84 years, and the mean number of years of underground life was 25.58 years. Of 685 cases reporting as to occupation, 81.3 per cent were employed at the face of the coal and of 580 cases holing and undercutting accounted for 60 per cent. Seven hundred and forty-one of the men examined had used safety lamps, while only 9 had used candles; and the highest number of cases per 1,000 men employed occurred where the average candle power of the lamps was lowest. The author discusses the differential factors of illumination at the coal face, which in the main consists of the candlepower of the source of light used, the distance at which this light has to be placed from the coal face, the character of the surroundings, and the composition of the air at the coal face. The preventive measures suggested are as follows:

> It is in the first place necessary to improve the miner's lamp, and the mining engineer must no longer be content with an average illumination of one-fiftieth of a foot candle at the coal face. The introduction of electric lamps into general use is probable, as it seems unlikely sufficient light can be obtained in any other way. The

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[1] Llewellyn, T. L. Tyndall research student of the Royal Society. A lecture on miners' nystagnus, delivered at the Mining Machinery Exhibition, London, May 31, 1913.

elimination of unfit workmen by medical examination before employment would also be of the greatest service. Efficient ventilation and any hygienic measures will also help.

A full discussion of the compensation paid to workmen for nystagmus is contained in the first report of the Departmental Committee on Compensation for Industrial Diseases.[1] In that investigation it was emphasized that the burden of proof should rest on the employer. Upon the basis of the data procured the committee recommended that miners' nystagmus be added to the schedule of compensable diseases. As to malingering, the author of the bulletin under review says:

> A review of the literature on malingering fails to sustain the conclusion that the tendency to obtain compensation by fraud on account of impairment due to nystagmus is at all common.

The following table exhibits the cases of nystagmus among miners in the United Kingdom who received compensation under the Workmen's Compensation Act during the five years ending with 1912:

CASES OF MINER'S NYSTAGMUS COMPENSATED FOR UNDER THE WORKMEN'S COMPENSATION ACT, UNITED KINGDOM, 1908-1912.

[The number of coal miners has been derived from the annual reports of the chief inspector of mines and quarries, and the number of new cases and new and old cases combined from the annual statistics of the operations of the Workmen's Compensation Act.]

Year.	Number of coal miners.	Cases of nystagmus.			
		Number of new cases.	Rate per 10,000 coal miners.	Number of old and new cases.	Rate per 10,000 coal miners.
1908......	972,232	386	4.0	460	4.7
1909......	997,708	631	6.3	1.011	10.1
1910......	1,032,702	956	9.3	1.618	15.7
1911......	1,049,897	1,374	13.1	2,518	24.0
1912......	1,072,393	1,376	12.8	3,195	29.8
Total.	5,124,932	4,723	9.2	....	....

The above table emphasizes the importance of miner's nystagmus as an occupational disease. This aspect of the problem is briefly reemphasized in the following introductory remarks to an extended address on miner's nystagmus in a course of lectures delivered before the Royal College of Physicians of London by Shufflebotham.[2]

> Miners' nystagmus must be regarded as the commonest of all occupational diseases. This may be due to the fact that the mining industry is, after agriculture, the largest industry in the country. In my opinion the number of cases of miner's nystagmus far exceeds the numbers which would be given in compensation statistics which

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[1] Report of the Departmental Committee on Compensation for Industrial Diseases. London, 1907, pp. 21, 22, 159-161, 402, 403.

[2] Shufflebotham, Frank. The hygienic aspects of the coal-mining industry in the United Kingdom. British Medical Journal, March 21, 1914, p. 648.

take account only of cases in which undoubted incapacity for work has been produced, and not of the much larger numbers of early cases in which the patients are able to continue in their employment.

The subject of miner's nystagmus is referred to for the first time at some length in the Home Office report on the statistics of compensation for the year 1912.[1] After declaring that the "figures for nystagmus are remarkable," and reviewing the record of new and "continued" cases as shown in the table, the report continues:

> * * * a comparison of 1912 with 1909 shows that the number of new cases arising annually has more than doubled. The 1912 figures, however, show that the growth in the number of new cases has stopped for the present. What is perhaps more important is that the figures of "continued cases" show that the proportion of long-continued disablement cases is very high; the number of cases continued from 1911 to 1912 greatly exceeds the number of new cases that arose in 1911. It is evident that the adoption of means to prevent the occurrence of this disease, which the most recent investigations attribute to insufficiency of the light by which miners do their work, is becoming a matter of importance to the employer.

The report states that during 1913 there was a further increase in the number of new cases of nystagmus.

In commenting on the table given above the author of the bulletin under review says:

> It is regrettable that the statistics for nystagmus should not be given in sufficient detail as regards the total and average amounts paid in compensation and the average duration of the illness. As the large majority of cases of compensation on account of industrial diseases in the mining industry of Great Britain were for nystagmus, it would seem reasonably safe to apply the figure thus obtained to the cases compensated for during the year 1912. The average amount paid in compensation on account of nonfatal cases of industrial disease in the mining industry was £14.43 ($70.22). If this amount is applied to the 3,195 cases compensated during the year, the approximate total cost of workmen's compensation on account of nystagmus in the United Kingdom for the year 1912 was $224,353.

The economic importance of nystagmus as shown by German data is set forth in a summary statement derived form the statistical reports of the Bochum Miners' Union exhibiting the proportion of compensated nystagmus cases in the invalidity cases due to all causes, by divisional periods of life. This shows that of all the invalidity cases on account of which compensation was paid, 1908 to 1912, 18.2 per cent were the result of nystagmus, and that the disease is an affection of coal miners at the age of 31 to 50 years, when 19.5 per cent to 30.3 per cent of all invalidity requiring compensation is due to this single and well-defined specific cause of disablement. As to relative frequency, the number of cases of nystagmus per 1,000 members to which the sick fund of the Bochum Miners' Union was applied during the period 1905 to 1909 was 3.29, while during the period 1910 to

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[1] Statistics of compensation and of proceedings under Workmen's Compensation Act, 1906, and the Employers' Liability Act, 1880, during the year 1912. London, 1913, p. 9.

1913 the rate was 3.25. In the same union the invalidity rate on account of miners' nystagmus was 1.75 per 1,000 during the first five years and 1.70 per 1,000 during the last four years. Out of a total of 5,113 cases of nystagmus to which the invalidity insurance fund was applied during 1905-1913, 695, or 13.6 per cent, were complicated by other causes or diseases. Of this latter number, 330, or 47.5 per cent, were diseases of the eyeball or of the conjunctive tissue membrane and the eyelids. The following table shows the number of cases of miners' nystagmus to which the invalidity insurance fund was applied:

NUMBER OF CASES OF MINERS' NYSTAGMUS TO WHICH INVALIDITY INSURANCE FUND OF BOCHUM MINERS' UNION WAS APPLIED, 1905-1913.

Year.	Members in the union.	Cases of miners' nystagmus.	Nystagmus cases per 1,000 members.	Cases with secondary complications.	
				Number.	Per cent of nystagmus cases.
1905	263,000	463	1.76	107	23.1
1906	280,000	590	2.11	126	21.3
1907	301,000	432	1.43	72	16.7
1908	332,000	406	1.22	43	10.6
1909	340,000	757	2.23	61	8.1
1910	341,000	824	2.42	105	12.7
1911	348,000	797	2.29	73	9.2
1912	367,000	649	1.77	78	12.0
1913	396,000	195	.49	30	15.4
1905-1909	1,516,000	2,648	1.75	409	15.4
1910-1913	1,452,000	2,465	1.70	286	11.6

"These additional observations further emphasize the practical importance of miners' nystagmus as an occupational disease."

The only American investigation mentioned in the report is that undertaken by the Illinois Commission on Occupational Diseases which submitted its report under date of January, 1911.[1] The commission said:

> Two factors are operating to make this disease less frequent. Firstly, the condition is limited to pick miners, and they are becoming less numerous yearly on account of the increase of machine mining. * * * Secondly, the disease is confined to those pick men who work with the eyes in an unnatural position; that is, looking upward and to one side. Previous to the passing of the gross-weight law some years ago, the men were paid only for coal which would pass over a screen of a certain size. This caused the men to do a lot of overhead pick work in order to obtain the coal in large pieces. The gross-weight law forced the owners to pay for the entire quantity mined, and the miners now assume a more natural position. Of the 30,194 pick men in Illinois, we examined the eyes of about 500, or one-sixtieth of the entire number without finding a single case. * * *

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[1] Lane, Francis, and Ellis, J. B., Report of Commission on Occupational Diseases; Miners' nystagmus, 1911, p. 155.

Conclusions.—The disease is rare, and, owing to the passage of the gross-weight law and the increase of machine mining, it is becoming less frequent in the State of Illinois. The only cure is cessation of the occupation which caused it.

No statistical data are available as to the prevalence of nystagmus in the United States. According to the statistics of the United States Bureau of Mines the number of men employed underground is estimated at 596,470 for the year 1913.

As the average rate of new cases of nystagmus reported under the British Workmen's Compensation Act duting the five years ended with 1912 had been 9.2 per 10,000 employed, this rate, when applied to the total number of persons employed in coal mining in the United States in the year 1913, given by the Bureau of Mines as 747,644, would indicate the possible, if not probable, existence of 688 new cases of nystagmus per annum. As the cumulative rate of old and new cases under the English experience by the year 1912 had reached 29.8 per 10,000, this would indicate a possible, if not the probable, number of persons employed in American coal mining and affected with nystagmus as numbering 2,228 for the year 1913. These rates are unquestionably conservative, for they are far from the 5 per cent of ascertained cases for certain mining districts of Germany. If the proportion of American coal-mining employees affected with nystagmus were as high as 5 per cent, the number of such cases estimated for the year 1913 would be 37,382.

Applying to this estimate of nystagmus cases in the United States in 1913, namely, 2,228, the same rate of compensation expense indicated by the British figures ($70.22), the amount of compensation necessary to be paid for nystagmus would have been $156,450.

The author of the bulletin concludes that in view of foreign experience "it would seem extremely improbable that an occupational affliction so well defined should be wholly absent in the coal-mining industry of the United States. General investigations are not likely to yield useful results, but specialized inquiries should be directed exclusively to underground employees in mines using exclusively or extensively safety lamps as a precaution against mine explosions. Even though some of the apparent increase in the frequency rates of nystagmus for the United Kingdom be attributed to malingering because of the compensation paid on account of incapacity for work, it would seem reasonable to suppose that more cases of malingering or fraud would have been reported than are shown by the available records." "No reasons suggest themselves why this peculiar affliction should be limited to mining districts of European countries and not be found in American coal-mining districts where, on account of the gaseous nature of the mines, the use of safety lamps is compulsory." The relative infrequency of narrow mining seams in this country, and the more extended use of coal-mining machinery, it is thought, may account for a comparatively small number of cases of nystagmus if, as seems to be the general belief, the disease is due to eyestrain brought about by the constrained position of the miner working in a narrow vein.

As shown by the European experience, the affliction is not likely to attract general attention until compensation is required to be paid for it. * * * The information here presented should, however, serve the purpose of attracting general medical attention to an obscure affliction which, under existing conditions, may be erroneously diagnosed and neglected, when remedial measures would be of decided advantage to the miner and the mining industry.

COMPENSATION FOR OCCUPATIONAL DISEASES UNDER WORKMEN'S COMPENSATION LAWS.

The recent action of the Supreme Court of Connecticut (Miller *v.* American Steel & Wire Co., 97 Atl., 345), in denying compensation to a workman suffering from lead poisoning, is of more than local interest. Compensation had been awarded to the claimant by the commissioner of the district within which the injury occurred, and this award was affirmed by the superior court of New Haven County.

The word "accident" is not used in the law providing for compensation for injured workmen, provisions being made for compensation for "personal injury arising out of and in the course of" employment. The compensation commissioner and the superior court of New Haven County construed this language as broad enough to embrace occupational diseases as well as injuries through accident. The supreme court, one judge dissenting, examined the language of the law in its various parts, and took under consideration the apparent purposes of the legislature in enacting the statute in question, reaching the conclusion that the procedure prescribed in the act and various omissions of language thought proper if occupational diseases were to be included indicated an intent to omit them from the compensation system. The dissenting judge declared that the majority by "judicial construction ascertains that the term 'personal injury' includes only injury arising through accident, while I by judicial construction find the same term to include all injuries, whether arising from accident or disease."

The Supreme Court of Massachusetts supports the position adopted by the Connecticut dissenting judge in a case of lead poisoning, and one where blindness was induced by inhalation of poisonous gases at a kiln. The language of the Massachusetts law is practically the same in this connection as that of Connecticut, and the omission of the words "by accident" was held by the court to authorize the inclusion of occupational diseases.

The same view was taken by the industrial accident board of Michigan of the law of that State, which also omits the word "accident" from the body of the law, and an award was made in favor of a claimant injured by lead poisoning. The supreme court of the

State, however, construed the law as covering only the area embraced by the liability laws which it superseded, so that the necessity of an accidental origin was insisted upon, the court saying also that the use of the words "accidental injury" in the title was restrictive. This corresponds in turn with the view taken of the similar language of the Ohio statute by the industrial commission and the supreme court of that State. The Supreme Court of New Jersey also denied compensation for disability caused by an eczema probably due to an acid used in a bleachery, the injury being held not to be one by accident, since no specific time or place of its occurrence could be pointed out. As matters now stand, therefore, of the States in which this question has been before the courts of last resort, Massachusetts is alone in adopting such a broad construction of the law as to admit occupational diseases, in the absence of a more specific term than "personal injury." The law of California was amended last year by substituting the word "injury" for "accident" throughout, so as to allow compensation for occupational diseases.

In the field of Federal legislation, it may be noted that the act of May 30, 1908, which applies to a portion of the civilian employees of the United States, awards compensation where an employee "is injured in the course" of his employment. The word "accident," however, is used in connection with the reporting of accidents, and a statement is required as to the nature of the accident and injury, and whether the accident was due to negligence; the act also provides compensation "in the case of any accident which shall result in death." In construing this language the Attorney General of the United States held that it was apparent that the statute was intended to apply to injuries of an accidental nature only, and not to the effects of disease.

The presidential order of 1914, applicable to the Panama Canal and the Panama Railroad, contains the words "personal injury" without the qualifying expression "by accident," but is administered in the light of the foregoing ruling of the Attorney General so as to exclude occupational diseases from its scope. It may be noted, however, that the Solicitor of the Department of Labor has distinguished certain cases, as of lead poisoning, from the case in which the ruling of the Attorney General above noted was given, so that awards for compensation have been made for certain occupational diseases under the act of 1908.

An interesting sidelight on the present attitude of Congress comes to notice in the progress of efforts to secure the enactment of a more inclusive and adequate law for the compensation of Federal employees. Bills introduced in the last session of Congress, and early in the present term, contained provisions for compensating employees suffering from occupational diseases. These were eliminated in committee, however, the explanation being made on the floor of the House during debate that it was thought "for the best interests of everyone at this time, for the advancement of this most progressive legislation, that this phrase 'occupational disease' should not be incorporated in the bill." Again it was said, "It developed that there was considerable difficulty in defining the phrase 'occupational disease;' and it was also called to our attention that in quite a number of cases in a number of States the court held this language which we have in the bill would cover occupational diseases in certain cases—at least a number of them—and for that reason I think it was left out, or that was one of the chief reasons why it was left out." A number of Members spoke in favor of including occupational diseases, but were restrained from pressing amendments to that effect by the plea that to attempt to make the act thus inclusive would lead to delay in its passage which might result in an ultimate failure of enactment at the present session. The discussion from which the above quotations are made ended in the bill being brought to vote and its passage by the House on July 12 by a vote of 285 yeas to 2 nays. The bill was on the next day transmitted to the Senate, and was favorably reported to that body by the Committee on Education and Labor on July 25.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

CONNECTICUT.[1]

A peculiarity of the Connecticut workmen's compensation law is that it provides a district system of administration with the exercise of certain centralized functions as a subordinate and incidental feature. This plan, in the opinion of the commissioners, has obviated the necessity of employing a corps of investigators and subofficials and is especially valuable in granting certificates of financial ability to employers desiring to carry their own risk, since "each commissioner has knowledge by common repute, and in many cases by personal acquaintance, of the character, business standing, and social and business ideals of the heads of the industrial institutions that apply for certificates. He also enjoys a personal acquaintance with the responsible adjusters of the various companies and with the representatives of local trade unions who sometimes represent the interests of employees at hearings. Not infrequently he knows personally the circumstances and character of the injured employee himself." He is thus able to take notice of many facts essential to the administration of justice.

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[1] Connecticut. Board of compensation commissioners. Second annual report for the year ending Sept. 30, 1915. Hartford, 1915. 30 pp.

> In the exercise of his power to limit the fees of physicians to those prevailing in the community for persons of like standard of living, in his judgment of the value of testimony of medical experts in accordance with their recognized standing in their profession, and in his occasional designation of experts to act as his advisor by stipulation of the parties, the knowledge acquired by the commissioner through local residence and acquaintance is invaluable. It is doubtful if any feature of the act contributes more to the ends of justice than the commissioner's personal knowledge of the individuals of the medical profession.

Instead of lack of coherence and unity of policy, as some thought might result from this plan, "experience has convinced us that no greater misfortune could befall the administration of the workmen's compensation act in Connecticut than the abolition of the district system of jurisdiction."

Under this system, during the two years since the act went into effect on January 1, 1914, 55,124 injuries were reported, 18,054 (32.75 per cent) of which occurred prior to November 1, 1914, covered by the commissioners' first report, and 37,070 (67.25 per cent) between November 1, 1914, and January 1, 1916, included in the report under review.[1] In presenting these figures attention is called to the fact that the increase in reported accidents during the latter 14 months was because that period was one of marked industrial activity, whereas the period prior to November 1, 1914, was relatively one of industrial depression. In the two years ending January 1, 1916, 10,492 cases were settled by voluntary agreement, 7,048 being adjusted between November 1, 1914, and January 1, 1916. The method of procedure in such cases was as follows:

> Such settlements are usually effected through an "adjuster" or "claim agent." In the case of self-insurers this is some official of the company or responsible employee, and in the case of insurance companies some young attorney or other competent person who has worked into the post from a clerical position. If the accident occurs in the plant of a self-insurer it is promptly made known through the first-aid department, and when the waiting period [2] has elapsed an agreement on the form provided by the commissioners is put before the employee for execution. If the injured employee is working in the plant of an insured employer, the insurer is notified of the injury on the form provided by the insurer, and if the injury is one promising to call for weekly compensation the adjuster makes due investigation and, if the claim is found valid, it is settled in like manner. In most cases settlement is effected without delay or misunderstanding. Sometimes the employee questions the accuracy of the computation of average weekly earnings and asks to have it verified. In other instances the employee delays until he can consult some friend; not infrequently such employee or friend consults the commissioner before signing the agreement. As soon as the agreement is executed, it is forwarded to the commissioner for his approval, as it does not become effective until so approved and duly filed with the clerk of the superior court for the county.

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[1] The number of these accidents which resulted fatally is nowhere shown in the commissioners' report.

[2] Ten days.

The number of formal hearings resulting in findings and awards was 106 prior to November 1, 1914, and 427 subsequent to that date; 533 in all. This increase, it is stated, "is a fair index of the increase in the volume of business transacted in the several districts, but this does not reflect an increased tendency on the part of employers or their insurers to contest claims; it is rather the normal development under the act."

It is pointed out that the cases settled by voluntary agreement and those determined as a result of formal hearings do not represent accurately the manner in which the act is administered because a great many cases were "settled by informal hearings, friendly conferences, or during the course of a hearing formally set and partially or wholly completed." Of such no record was made.

The workmen's compensation law provides that advance payment of awards may be made to needy employees, and also that lump sum payments may be made in cases where, after investigation, such procedure is deemed advisable. The report states that many applications under each privilege were made. Advance payments, as a rule, are made without the knowledge or advice of the commissioner, being purely an arrangement between the employer and the injured employee or dependent. The report does not indicate the number of claims handled under each designation.

An important duty of the commissioner is stated to be the approval of bills for medical, surgical, and hospital service, and occasionally for legal and other services. In very few instances has this power been exercised in connection with legal fees, and "there has also, on the whole, been a like disposition on the part of the medical profession to comply with the terms of the act."

The report recognizes the evils of malingering, especially the unconscious malingering that is manifested during the period of convalescence, or by the neurotic, alcoholic, or subnormal type "whose vitality and stamina from congenital or other causes were of a low order prior to the injury." However, it is stated that malingering in any form has not yet assumed a serious aspect in the State.

The expenditures under the workmen's compensation act, during the 22 months ending November 1, 1915, as estimated by the commissioners' report, are indicated in the following table.

The commissioner's estimate assumes that the installation of safety devices is to be regarded as a part of the cost of the workmen's compensation act to employers, although a large part, if not all, of such safeguarding was apparently required under the provisions of State labor laws in force long before the enactment of the compensation act.

TOTAL COST OF WORKMEN'S COMPENSATION INSURANCE IN CONNECTICUT, JAN. 1, 1914 TO NOV. 1, 1915.

Item.	Jan. 1, 1914, to Nov. 1, 1914.	Nov. 1, 1914, to Nov. 1, 1915.	Total.
Expenditures by self-insured employers:[1]			
Disbursed for compensation	$49,685.58	$101,812.10	$151,497.68
Disbursed for medical, surgical, and hospital bills	36,866.15	67,899.57	104,765.72
Estimated added cost of clerical service necessary to administer settlements	4,384.30	9,971.50	14,355.80
Estimated cost of emergency treatments, nurses, and private hospitals maintained in the employers' plants fairly due to provisions of compensation act	17,645.65	43,903.57	61,549.22
Estimated cost of safety devices which presumably would not have been expended but for the existence of the act	16,056.14	15,542.65	31,598.79
Total	124,637.82	239,129.39	363,767.21
Paid to employees through insurance companies: Disbursed for compensation and for medical, surgical, and hospital services[2]	396,684.30	605,455.66	1,002,139.96
Total	521,322.12	844,585.05	1,365,907.17
Other costs:			
Estimated amount expended by employers protected by insurance for safety devices, etc., emergency treatment, etc., which presumably would not have been expended but for the existence of the act	....	....	363,776.81
Administration of the act	....	....	70,000.00
Grand total	....	....	[3] 1,799,683.98

[1] This information was procured from large employers of labor to whom certificates of solvency had been granted.

[2] "Some of the insurance companies have made no distinction between payments due to compensation awards and payments due to medical, surgical, and hospital expenses of persons who are not entitled to receive any weekly compensation awards. Other companies have kept these two items separate and from those figures we gather that nearly one-third of the expense has been due to payments of the latter character."

[3] This does not include an indefinite sum not ascertainable representing the difference between the amount actually disbursed by insurance companies as shown above and the amount collected by them in premiums from insurers.

It will thus be seen that by self-insurers $151,497.68 has been paid to employees as compensation since the act went into effect, and $104,765.72 has been paid during the same period for medical, surgical, and hospital fees. In this class of employers the ratio of medical, surgical, and hospital fees to the weekly compensation paid employees in the two years was 69.1 per cent, for the year 1913–14 [1] the ratio was 74.1 per cent, and for the year 1914–15 it was 66.6 per cent.

The ratio of the cost of extra clerical force made necessary for the administration of the act to the total fund administered (medical fees and compensation) for the two years was 5.6 per cent, for the year 1913–14 [1] it was 5.06 per cent, and for the year 1914–15 it was 5.8 per cent. This reveals a relatively small cost of administration in the case of self-insurers.

Two years' experience in administering the workmen's compensation act has prompted the following recommendations:

A provision to prevent instances of dilatory and unbusinesslike methods adopted by some insurance companies by giving the board of commissioners power to lodge complaint with the insurance commissioner against any licensed insurer operating under the compensation act and requiring a hearing before that official, said license to be revoked in case it is shown that such insurance company has failed to be reasonably prompt in the settlement of cases.

A provision allowing concurrent payment of compensation to resident and nonresident aliens.

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[1] This is taken from the report. Since the act did not become effective until Jan. 1, 1914, it is probable that the figures do not cover any portion of 1913, but only the first 10 months of 1914.

A provision by which employees may be protected in the collection of compensation against those employers who ignore the law and plan to defraud their injured employees, said protection being effected by authorizing the commissioners in the several districts to issue writs of attachment against such employers.

An amendment providing that when an appeal from the decision of a compensation commissioner is taken to the superior court and such appeal shall be, in the judgment of such court, frivolous or taken for the purpose of vexation or delay, the superior court shall be permitted to tax costs in its discretion.

To avoid discrimination against defectives the commissioners submit a suggestion, rather than a recommendation, intended to relieve employers from liability in cases of accident resulting from the physical defect of the employee. Thus, for example, where an employee is deaf, or subject to epilepsy, or has hernia or varicose veins, the commissioners believe that a fair way to deal with him would be "to permit the employer to enter into an agreement by virtue of which such person should stipulate that in the event of an injury occurring to him by reason of some named physical defect he would make no claim for compensation, and that this agreement should bind his dependents in case the injury resulted in death."

NEBRASKA.[1]

November 30, 1915, completed the first year of the operation of the Nebraska workmen's compensation law, and the results achieved during the 12 months are set forth in Bulletin No. 32 recently issued by the State department of labor.

The Nebraska law is elective; it provides a 14-day waiting period, unless the disablity continues eight weeks or more, when compensation is computed from the date of the injury; medical attention and hospital expenses are provided for 21 days in an amount not exceeding $200; total disability compensation for the first 300 weeks is 50 per cent of the employee's wages, subject to a maximum weekly payment of $10 and a minimum weekly payment of $5; beneficiaries totally dependent receive 50 per cent of the wages of the deceased for a period not exceeding 350 weeks, while those partially dependent receive a proportionate payment; no provision is made for the administration of the law, settlements being made by agreement between the parties, with recourse to the courts in case of disagreement.

The first annual report opens with a brief outline of the principle of workmen's compensation, a page of "safety first" suggestions, and one including "short 'safety first' sermons." It then presents a review of the year under the following general heads: The first year of compensation; noncompensation cases; compensation awards;

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[1] Nebraska. State department of labor. Report upon the operation of the workmen's compensation law for the year ending Nov. 30, 1915. University Place [1916]. 164 pp. Illustrated.

"employers' liability" at common law; gallery of injured employees; first-aid suggestions; commutation of claims and accidents; supreme court decisions; death benefit and methods of procedure; to whom the law applies; the Nebraska workmen's compensation law (text).

During the year there were 4,082 reports of accidents filed. Of this number 2,222 were completed reports, representing 605 compensated and 1,617 uncompensated cases. In addition there were 6 fatal accidents reported. The total compensation paid for all accidents was $34,172.60, or an average of $55.93 per case, and the total paid for medical attention and for hospital expenses, etc., in fatal and all nonfatal cases, was $25,549.89, or an average of $11.47 per case. The total number of days lost by employees in compensated cases was 20,789,[1] and the total number lost by employees in uncompensated cases was 5,060, the average, including only those cases reporting definitely the number of days lost, in the first instance being 36.5 days and in the latter instance 6.6 days. The following table exhibits the record of fatal accidents.

NUMBER OF FATAL ACCIDENTS, CLASSIFIED BY CAUSE, SHOWING TOTAL AND AVERAGE BENEFITS PAID FOR YEAR ENDING NOV. 30, 1915.

Cause.	Number of cases.	Compensation paid.	Medical attention.	Hospital services.	Average payment.
Incident to employment	2	$5,000.00			$2,500.00
Fault not placed	3	2,194.17	$30.00	$95.00	731.39
Negligence of employer	1	2,054.81	2.00		2,054.81
Total	6	9,248.98	32.00	95.00	[1] 1,041.46

[1] This is taken from the report; the average payment should be $1,541.50.

In providing payment to beneficiaries in cases of death the law specifies a maximum weekly payment of $10 and a minimum weekly payment of $5. In each of the above cases the employee was receiving the maximum weekly wage—namely, $20—thus entitling each beneficiary to $3,500, with $100 additional for burial expenses. That smaller amounts were paid in each case, it is explained, is due to the absence of some specific method of directing and supervising settlements, the result being that the beneficiaries were induced to settle their claims according to their immediate needs at the time. In other words, settlement was apparently based upon the kind of bargain the representative of the insurance company or the employer was able to make with the beneficiary. "The State must provide some board or commission or individual whose duty it will be to protect the interests of all parties in the administration of the compensation law."

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[1] See note 1 attached to the table on page 58.

The following table summarizes, by cause or "fault," all nonfatal accidents reported, showing the days lost and the total and average amount of benefits paid:

NUMBER OF COMPENSATED AND NONCOMPENSATED CASES, BY CAUSE, SHOWING DAYS LOST, AND THE TOTAL AND AVERAGE AMOUNT PAID FOR COMPENSATION AND OTHER BENEFITS, FOR THE YEAR ENDING NOV. 30, 1915.

Cause or "fault."	Number of cases.	Per cent.	Days lost.[1]	Compensation.	Medical attention.	Hospital and other expenses.	Average benefits to employees.
Compensated cases:							
Neglect of employer	17	2.81	1,099	$1,170.93	$596.75	....	$103.98
Neglect of employee	38	6.28	1,157	2,088.61	1,093.35	$54.36	85.17
Fellow servant	32	5.29	1,183	945.97	699.88	37.00	52.50
Fault not placed	155	25.62	5,505	8,549.69	3,752.03	115.70	80.11
Incident of employment	363	60.00	11,845	12,168.42	8,854.41	276.10	58.67
Total, compensated cases	605	100.00	20,789	24,923.62	14,996.42	483.16	66.78
Noncompensated cases:							
Neglect of employer	61	3.77	152	....	345.60	....	5.67
Neglect of employee	80	4.95	306	....	609.30	21.00	7.88
Fellow servant	59	3.65	231	....	379.65	....	6.44
Comparative negligence	13	.80	60	....	59.00	5.80	4.98
Fault not placed	313	19.36	1,051	....	2,367.81	72.85	7.80
Incident of employment	1,091	67.47	3,260	....	5,894.80	187.50	5.57
Total, noncompensated cases	[2] 1,617	100.00	5,060	....	9,656.16	287.15	6.15
Grand total	2,222	....	25,849	24,923.62	24,652.58	770.31	22.66

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[1] Although this column is computed from the detailed tables in the report, the total here given for compensated cases does not agree with the total given for such cases in the report, which on page 27 indicates a total of 11,754 days lost and on page 40 a total of 20,705 days lost This discrepancy in the report itself is not explained. This column does not include 759 cases in which no time was lost or 122 cases in which the time lost was not definitely stated.

[2] This total includes 49 cases in which the disability exceeded 14 calendar days and for which compensation should have been paid to the injured employee. "If there was some method of administration of the Nebraska compensation law, these [50] injured employees would have had a chance, at least, of receiving the compensation to which they were entitled and in most cases paid for in insurance premiums by their employers."

Commenting on the 605 compensated cases, the report says:

> * * * 71 per cent of the total number received money settlements for injuries simply by reason of the provisions of the compensation law, whereas if the rules of the common law had prevailed only 29 per cent of the total number could have recovered money settlement.

In giving the number of days lost in compensated cases, the report includes 99 cases in each of which the days lost were 14 or less, the total compensation in these cases amounting to $1,570.46. It is not clear why compensation was paid in these cases since the law provides a waiting period of 14 days.

The report reviews at length the method of procedure under common-law practice, and shows that the principle of workmen's compensation has proved its superiority over employers' liability from the following standpoints:

1. The prevention of accidents.
2. Elimination of waste.
3. Immediate payment of the injured workman or his family.

4. Diminishment of friction between employers and workmen.
5. Equitable method of determining compensation.
6. The workman receives full compensation awarded him.
7. The cost to employer a part of cost of production.

The first year's experience under the workmen's compensation law in Nebraska seems to emphasize the need of some method of administration in order that disputed cases may be adjusted without recourse to the courts, which usually results not only in a large expense to the injured employee, but in long and unnecessary delay in the award of compensation if the litigation should be favorable to the claimant. Thus, the first recommendation made in the report is for the provision of a board, commission, or individual with authority to supervise and administer the law. Other recommendations are as follows:

Reduction of the waiting period to seven days.

Raising the maximum from $10 to $12.

Adding the finger and toe schedule.

Making the law apply to employers of one or more employees instead of five.

Stating more clearly the rule for lump-sum settlements.

Making the law apply to members of the State militia.

Provisions that upon the application of either party the court may order and determine matters of controversy in a summary manner.

More clearly defining the provisions as to minors.

Giving the board or commission or some individual power to order a lump-sum settlement upon the application of either party, with right of an appeal to the courts.

Some method by which there will be a larger degree of guaranteed solvency of the employer or insurance company.

Requiring all settlements and releases to have the approval of some board or commission or individual.

Copies of all releases and settlements to be filed with some court or office of record.

More specific and stringent State laws dealing with insurance companies which write Nebraska business without first procuring a State license.

Making more specific and certain many of the provisions of the law to the end that misunderstandings and litigation may be minimized.

Graduate benefits according to number of children until a reasonable maximum percentage is reached.

In case of death or permanent disability reduce the number of weekly payments by increasing the per cent.

Requiring the insurance commissioner to notify the board, commission, or individual charged with the administration of the law of each insurance company licensed to write compensation insurance under the law.

Raise the percentage from 50 per cent to 66⅔ per cent.

Making payments in case of death 66⅔ per cent of wages for 312 weeks in lieu of 350 weeks.

Penalize employers who fail to provide safety devices as required by the State law.

More clearly define what constitutes "lost earning power."

Penalize employers and insurance companies who fail to report all accidents in detail.

Requiring elections under the law to be filed with the administrating commission, board, or individual instead of with the insurance commissioner.

Adequate appropriation by the legislature for the administration of the law.
Providing specific benefits for the larger number of injuries.
Raising the minimum from $5 per week to $6 per week.
More clearly defining the waiting period.
Prohibiting deductions in lump-sum settlements.

OHIO.

With the rapid extension of workmen's compensation laws has come an increased recognition of the importance of measures guaranteeing the payment of awards through the long continuing periods contemplated by the acts. In some States insurance to guarantee such payments is compulsory, while in others it is at the option of the employer. The laws of several States provide for State insurance funds, either exclusive in their operations or competing with private insurance institutions. The opposition of the insurance companies to any State monopoly of compensation insurance has been commented on, the situation being particularly acute in the State of Ohio, where the industrial commission adopted the position that, under the law, insurance must be taken in the State fund and not elsewhere. This subject was brought to the supreme court of the State for determination, and an opinion deciding a portion of the controversy was recently handed down by that court. The full text of the opinion is not available, but Chief Justice Nichols has issued a statement as follows:

> In the several quo warranto cases pending in this court, involving the status of indemnity insurance companies under the Workmen's Compensation Act, as to which oral argument has been had, the court has reached a unanimous conclusion as to three of the five main propositions, the court holding:
>
> First. That section 22 of the act is constitutional.
>
> Second. That section 9510 is not repealed by implication, but remains and is to be construed in connection with section 54 of the Workmen's Compensation Act.
>
> Third. That contracts of indemnity may be written by the several companies, protecting employers to the extent of compensation paid to employees for accidents and acts of negligence other than those inflicted by the willful acts of the employer, his officers or agents, or by the failure of such employer or any of his officers or agents, to observe any lawful requirements for the safety of employees. To this extent such contracts of indemnity are valid.
>
> The court has not reached a conclusion satisfactory to itself as to the two remaining questions:
>
> First. Whether contracts of indemnity may be written protecting employers to the extent of *compensation* paid to employees for acts of negligence generally; that is, to the extent of covering injuries inflicted by the willful act of the employer, or his failure to observe lawful requirements for the safety of employees.
>
> Second. As to the right of employers to indemnify themselves against the civil liability enforced in suits by employees to recover for the negligent act of the employer *other* than where the injury is inflicted by the willful act of the employer, or by his failure to observe lawful requirements for the safety of his employees, in cases

where the injured employee has refused to apply for compensation and has instituted action to recover in a court of law.

As to these two propositions the court invites a reargument when the court reconvenes in the fall.

Section 22 (sec. 1465–69), which is declared constitutional, requires every employer of five or more workmen regularly in the same business to pay into the State insurance fund the amount of premium determined and fixed by the State authorities other than self-insurers approved by the commission; such self-insurers are obliged, however, to contribute to the surplus fund, which is a guaranty fund, for the State insurance fund, and may also be required, in the discretion of the commission, to give security or bond to guarantee the payment of their own obligations to their injured employees.

Section 9510, referred to in the second heading of the statement, is a section of the General Code applying to any employee whose employer is insured, and has for its purpose to confer upon the employee the rights of the employer under the insurance policy in any case in which the employee has secured a judgment against his employer for injuries due to the latter's negligence. The effect of the ruling on this point is to maintain this section in effect in connection with section 54 (sec. 1465–101) of the Compensation Act, which declares all contracts of insurance to protect an employer against loss or damages on account of injury to his employees to be void unless such contracts specifically provide for the payment of medical and hospital services, etc., and such compensation as is provided for under the act. Contracts insuring against liability for injuries caused by the willful act of the employer or his agents, or due to the failure to observe any lawful requirement for the safety of employees are also forbidden.

It is evident, therefore, that while stock insurance companies are not barred from writing liability and compensation insurance in the State their field of action is considerably restricted as compared with the situation prior to the enactment of the compensation law.

COAL-MINE FATALITIES IN THE UNITED STATES, 1915, AND DURING THE PERIOD 1870 TO 1914.

Coal-mine fatalities in the United States in 1915, according to a recent report of the United States Bureau of Mines,[1] show a decrease as compared with the year 1914. The fatality rate for 1915, based on the preliminary estimate of the number of men employed as reported from State mine inspectors, was 2.95 per 1,000 men employed, the lowest rate since 1898, when the fatality rate was 2.71. The actual number killed in 1915 was the lowest since 1906. The principal decreases in the number of fatalities are shown for those resulting from falls of roof, haulage, gas explosions, and shaft accidents.

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[1] United States Bureau of Mines. Coal-mine fatalities in the United States, 1915. Compiled by Albert H. Fay. Washington, 1916. 80 pp.

> The saving of lives has been the result of closer and more careful inspection by the State inspector; better enforcement of laws and regulations by the operators; the miner's realization of the dangers attending his daily work, and his efforts to reduce accidents, due to the educational campaign conducted in his behalf; the more general use of safety lamps in doubtful mines; the use of permissible explosives; humidifying dusty mines; first aid and rescue training, which saves lives that might otherwise be lost by reason of injuries received; the enactment of industrial accident compensation laws; and last but not least, the spirit of cooperation on the part of all concerned.

The 2,066 fatalities underground reported for 1915 are distributed, by cause, as follows:

NUMBER AND PER CENT OF UNDERGROUND FATALITIES, BY CAUSE, 1915.

Cause.	Number.	Per cent.
Falls of roof	917	44.38
Mine cars and locomotives	347	16.80
Falls of face or pillar coal	160	7.74
Explosives	155	7.50
Gas explosions and burning gas	153	7.41
Coal-dust explosions	151	7.31
Electricity	89	4.31
Suffocation from mine gases	16	.77
Mine machines	12	.58
Animals	3	.15
Mine fires	1	.05
Other causes	62	3.00
Total	2,066	100.00

The number and percentage of the 2,200 underground accidents in 1914, by causes, was about identical with the above, save that gas explosions and burning gas preceded in importance falls of face or pillar coal, and only 17 deaths were caused by coal-dust explosions instead of 151 as shown in the table.

A study is presented of the number of mine fatalities in the United States for the period 1870 to 1915, together with rates based on the number of men employed without regard to the number of days employed in the year; a rate is also shown on the basis of 1,000,000 tons of coal mined. These figures are presented in a table on page 67.

The report controverts the general impression that mine disasters are the principal and most important causes of fatalities in mines. For example, in 1915 fatalities due to gas and dust explosions represented only about 13 per cent of the total number killed. The principal cause of fatalities in coal mines is falls of roof or pillar coal, which in 1915 accounted for approximately 48 per cent of the fatalities, each accident involving usually only one or two men at a time. The report tabulates 22 principal coal-mine disasters during the years 1914 and 1915, in each of which five or more men were killed. The total number killed in these disasters was 578.

A study of 3,675 fatalities due to explosives occurring in the different States for periods varying from 5 to 44 years, for which continuous records are available, shows that premature blasts and short fuses seem to have been responsible for the largest percentage, or 24.87; handling and transportation were responsible for 17 per cent; and shots breaking through pillars or ribs, 5.88 per cent.

Studies by the Bureau of Mines of fatalities due to electricity, based on 710 fatalities caused by electricity, show that more than one-half of such fatalities were caused by trolley wires, indicating that these should be better guarded. About 49 per cent of the fatalities were due to direct contact with trolley wires and 18.45 per cent were due to contact with machine feed wires.

As a part of this bulletin on coal-mine fatalities in 1915 there appears a paper by A. H. Fay, the author of the bulletin, on mine accidents and uniform records which was read before the joint meeting of the conservation and mining sections of the Second Pan-American Scientific Congress at Washington, D. C., December 27, 1915, to January 8, 1916. This paper summarizes the principal features of accident studies of the Bureau of Mines and makes some comparisons as to the fatality rates in the mineral industries of the United States for 1914 on a 300-day basis, as follows:

FATALITY RATES IN THE MINERAL INDUSTRIES OF THE UNITED STATES COMPARED ON A 300-DAY BASIS, FOR 1914.

Industry.	Actual days active.	Employees.		Killed.	Number killed per 1,000 employed.	
		Actual.	On 300-day basis.		On actual basis.	On 300-day basis.
Metal mines	271	158,115	142,619	559	3.54	3.92
Ore-dressing plants	302	14,501	14,576	23	1.59	1.58
Smelting plants	349	26,960	31,384	33	1.32	1.05
Coal mines	207	763,185	526,598	2,454	3.22	4.67
Coke ovens	286	22,313	21,241	45	2.02	2.12
Quarries	233	87,936	68,187	180	2.05	2.64

Two of the more important tables in the bulletin under review are reproduced:

PRODUCTION, NUMBER OF MEN EMPLOYED, AND NUMBER OF MEN KILLED IN AND ABOUT THE COAL MINES IN THE UNITED STATES DURING THE CALENDAR YEAR 1915.

State.	Production (short tons).	Number employed underground and on surface.[1]	Number killed.			Number killed per 1,000 employed.
			Underground.	Surface.	Total.	
Alabama		23,924	61	2	63	2.63
Alaska and California		*56*				
Arkansas		3,939	6	2	8	2.03
Colorado		12,484	60	3	63	5.05
Georgia and North Carolina		335				
Idaho and Nevada		11				
Illinois		*79,499*	131	5	136	1.71
Indiana		25,540	43	3	46	1.80
Iowa		*16,057*	32	2	34	2.12
Kansas		12,500	23	1	24	1.92
Kentucky		*28,764*	61	3	64	2.23
Maryland		5,500	9	1	10	1.82
Michigan		2,250	6	1	7	3.11
Missouri		11,000	17		17	1.55
Montana		3,399	12	1	13	3.82
New Mexico		*4,178*	19		19	4.55
North Dakota		650	1		1	1.54
Ohio		*45,401*	65		65	1.43
Oklahoma		7,900	17	5	22	2.78
Oregon		940				
Pennsylvania (anthracite)		*179,679*	526	60	586	3.26
Pennsylvania (bituminous)		*184,801*	408	30	438	2.38
South Dakota		*47*				
Tennessee		*10,116*	25		25	2.47
Texas		4,275	1		1	.23
Utah		3,740	10	1	11	2.94
Virginia		9,000	46	2	48	5.33
Washington		4,666	42	3	45	9.64
West Virginia		80,098	462	32	494	6.17
Wyoming		7,425	23	3	26	3.50
Total, 1915	518,000,000	767,554	2,106	160	2,266	2.95
Total, 1914	513,525,477	763,185	2,288	166	2,454	3.22

[1] Estimated by State mine inspector, except as to figures in italics, which indicate number employed during 1914.

MEN EMPLOYED, AND FATALITY RATES PER 1,000 MEN EMPLOYED, IN AND ABOUT THE COAL MINES IN VARIOUS COUNTRIES.[1]

Country.	1911			1912			1913			1914		
	Employed.	Killed.		Employed.	Killed.		Employed.	Killed.		Employed.	Killed.	
		Total.	Per 1,000 employed.		Total.	Per 1,000 employed.		Total.	Per 1,000 employed.		Total.	Per 1,000 employed.
Austria [2]	69,827	88	1.26	70,777	113	1.60	....	......	......	....	......	......
Belgium	144,054	165	1.15	145,670	145	1.00	....	......	......	....	......	......
British Columbia	6,873	16	2.33	7,130	28	3.93	6,671	27	4.05	5,732	17	2.97
France	200,212	217	1.08	202,365	302	1.49	....	......	......	....	......	......
Germany [3]	586,538	1,176	2.01	593,551	1,506	2.54	....	......	......	....	......	......
Great Britain [4]	1,067,213	1,265	1.19	1,069,090	1,276	1.17	1,127,890	1,753	1.55	1,133,746	1,219	1.08
India	106,598	148	1.38	121,392	157	1.29	133,042	185	1.39	137,851	145	1.05
Japan	145,412	497	3.42	....	......	......	....	......	......	....	......	......
New South Wales	17,657	15	.85	18,051	30	1.66	18,966	18	.95	19,977	17	.85
New Zealand	4,290	14	3.26	4,328	9	2.08	4,250	6	1.38	4,734	[5] 49	10.35
Nova Scotia [6]	12,522	36	2.87	13,297	35	2.63	13,604	42	3.07	14,638	36	2.46
Queensland	2,152	4	1.86	2,193	0	......	2,474	2	.81	2,510	3	1.20
Union of South Africa	21,342	48	2.25	21,202	51	2.41	23,089	76	3.29	....	......	......
United States	728,348	2,656	3.65	722,662	2,419	3.35	747,644	2,785	3.73	763,185	2,454	3.22

[1] Compiled from official reports.
[2] Steinkohle only.
[3] Steinkohle only. Figures are for Prussia only.
[4] For all mines under Coal Mines Regulation Act, including about 5 per cent by tonnage, of minerals other than coal.
[5] Includes 43 fatalities resulting from the explosion at the Ralph mine at Huntly, Sept. 9, 1914.
[6] For fiscal years ending Sept. 30.

The report does not give the number of days worked per year in the various countries, but in all European countries the days worked are considerably in excess of the number worked in the United States, and a correction of the fatality rates to equalize the number of days would show that the record for this country is much more unfavorable than appears in the above table.

A more comprehensive report of fatalities in coal mines is presented in Bulletin 115, issued by the Bureau of Mines in April, 1916.[1] It deals with coal-mine fatalities in the United States from 1870 to 1914, inclusive, with statistics of coal production, labor, and mining methods by States and calendar years. In it emphasis is placed on the need of safeguarding the three-quarters of a million men employed in this industry, and the figures which are presented, although showing an appalling fatality record for past years, "represent a diagnosis of the hazard of the mining industry, pointing out the principal physical causes of accidents, and make available a body of uniform facts that will serve as a basis of preventive measures for use in future operations." The author of the bulletin strongly urges cooperation between operators and employees and among employees themselves to reduce the accident hazard so far as it may be attributed to the personal element.

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[1] United States Bureau of Mines. Coal-mine accidents in the United States, 1870–1914. Compiled by Albert H. Fay. Washington, 1916. 370 pp.

No accurate data for the United States are available showing how far the personal element as related to the miner and his coworker, the mine foreman, or to the superintendent and others in authority, contributes to accidents. Many accidents are due to inexperience on the part of the miner, his failure to heed orders, a misunderstanding of instructions, and last but not least, carelessness of himself or his fellow worker. A foreman or superintendent may fail to give proper warning regarding the conditions of certain parts of the mine; he may not have inspected certain rooms or entries on the day of a mine accident; the mine may not be properly equipped, or the operator may neglect to comply with the inspector's recommendations. There is, therefore, a personal element on the part of both the operator and the miner that must be considered. Legislation and the enactment of compensation laws will make the operator realize the seriousness of the mine-accident situation, when fatalities and injuries are to be paid for in legal tender of the realm. The miner must be educated and made to realize the dangers he encounters; he must learn that self-preservation and the safety of his fellow workmen should receive his first attention; he should cooperate with his employer, his associates, and the State mine inspector to the end that the mine hazard may be reduced to a minimum. "Cooperation for safety" should be the watchwords of the operator, miner, State inspectors, and all others in any way interested in the mining industry.

The total production of coal in the United States from 1807 to the end of 1915,[1] the total number of men employed in the industry for each year since 1889, and the total number of men killed in and about coal mines, based upon such records as are available, are shown in the table following. In this connection it should be pointed out that the number of men employed and consequently the number killed per 1,000 employed are only roughly approximate, since reports of employers even at the present time do not usually show accurately the number of persons employed and the days and hours worked, which information is necessary for the computation of correct accident rates. As the author of the report states, "The actual number of men on the pay roll is much higher than the number of men really at work in the mines, and unfortunately it is the former figure that the operators too frequently report." For earlier years it is also practically certain that the reports of the number of persons killed are not complete.

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[1] The figures for 1915, it is stated, are subject to sight revision.

PRODUCTION, EMPLOYEES, AND FATALITIES IN COAL MINES OF THE UNITED STATES, SHOWING PERCENTAGE OF COAL-MINING INDUSTRY FOR WHICH COMPLETE RETURNS ARE AVAILABLE, 1870 TO 1915.

Period or year.	Total United States.		Portion of United States under inspection service.								
	Production, short tons.[1]	Number employed.[1]	Per cent of total—		Number killed.			Production per death, short tons.[3]	Days worked.	Average tonnage per man.[3]	
			Production.	Employees.	Total.[2]	Per 1,000 employed.	Per 1,000,000 short tons mined.			Per year.	Per day.
1807-1869	410,395,133										
1870	33,035,580		47.42		211	5.93	13.47	74,238		440	
1871	46,885,080		41.25		210	5.60	10.86	92,105		516	
1872	51,453,399		47.10		223	4.98	9.20	108,609		542	
1873	57,602,480		45.40		263	5.46	10.06	99,440		543	
1874	52,605,920		53.39		260	3.87	9.26	108,025		418	
1875	52,348,320		52.25		260	3.06	9.51	105,192		322	
1876	53,280,000		49.35		242	2.83	9.20	108,650		308	
1877	60,501,760		51.09		225	2.77	7.28	137,379		381	
1878	57,935,600		63.54		235	2.62	6.38	156,637		410	
1879	68,105,799		68.20		317	3.30	6.82	146,523		483	
1880	71,481,570		74.26		274	2.21	5.16	193,736		429	
1881	85,881,030		65.56		340	2.93	6.04	165,600		485	
1882	103,551,189		75.64		448	2.75	5.72	174,837		481	
1883	115,707,525		71.18		542	3.34	6.58	151,949		508	
1884	120,155,551		72.63		538	2.80	6.17	162,203		454	
1885	111,160,295		83.59		549	2.58	5.91	169,259		436	
1886	113,680,427		83.16		494	2.25	5.23	191,373		430	
1887	130,650,511		79.43		504	2.20	4.86	205,902		454	
1888	148,659,657		87.29		728	2.55	5.61	178,246		454	
1889	141,229,513	311,717	90.54	90.85	668	2.36	5.22	191,430		452	
1890	157,770,963	318,204	92.66	91.52	733	2.52	5.01	199,444	216	503	2.33
1891	168,566,669	332,147	93.53	93.54	956	3.08	6.06	164,912	215	507	2.36
1892	179,329,071	341,943	92.40	92.75	991	3.12	5.98	167,214	212	523	2.47
1893	182,352,774	363,309	97.40	97.74	958	2.70	5.39	185,403	201	500	2.49
1894	170,741,526	376,204	94.96	95.33	958	2.67	5.91	169,248	178	452	2.54
1895	193,117,530	382,879	98.44	98.21	1,142	3.04	6.00	166,466	195	505	2.59
1896	191,986,357	393,342	96.43	96.73	1,083	2.85	5.85	170,935	185	487	2.63
1897	200,229,199	397,701	97.25	97.71	990	2.55	5.08	196,699	179	501	2.80
1898	219,976,267	401,221	97.16	97.66	1,062	2.71	4.97	201,256	190	545	2.87
1899	253,741,192	410,635	96.16	96.34	1,241	3.14	5.08	196,610	214	617	2.88
1900	269,684,027	448,581	96.47	96.40	1,489	3.44	5.72	174,724	212	602	2.84
1901	293,299,816	485,544	99.37	99.02	1,574	3.27	5.40	185,165	216	606	2.81
1902	301,590,439	518,197	98.37	98.46	1,724	3.38	5.81	172,092	197	581	2.95
1903	357,356,416	566,260	98.52	98.29	1,926	3.46	5.47	182,796	220	633	2.88
1904	351,816,398	593,693	96.40	96.58	1,995	3.48	5.88	170,007	202	592	2.93
1905	392,722,635	626,045	98.38	98.29	2,232	3.63	5.78	173,109	212	628	2.96
1906	414,157,278	640,780	98.02	98.36	2,138	3.39	5.27	189,876	209	644	3.08
1907	480,363,424	680,492	99.49	99.14	3,242	4.81	6.78	147,407	231	708	3.06
1908	415,842,698	690,438	98.43	98.32	2,445	3.60	5.97	167,407	195	603	3.09
1909	460,814,616	[4] 666,552	99.99	99.99	2,642	3.96	5.73	174,416		691	
1910	501,596,378	725,030	100.00	100.00	2,821	3.89	5.62	177,808	220	692	3.15
1911	496,371,126	[5] 728,348	100.00	100.00	2,656	3.65	5.35	186,887	220	682	3.10
1912	534,466,580	722,662	100.00	100.00	2,419	3.35	4.53	220,945	225	740	3.29
1913	570,048,125	747,644	100.00	100.00	2,785	3.73	4.89	204,685	238	762	3.20
Total	9,844,247,843		89.46		49,733	3.32	5.65	177,083		588	
1914	513,525,477	763,185	100.00	100.00	2,454	3.22	4.78	209,261	207	673	3.25
1915[6]	518,000,000	767,554	100.00	100.00	2,266	2.95	4.37	228,600			

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[1] From annual volumes of Mineral Resources of the United States, U. S. Geol. Survey. See also Coal-mine fatalities in the United States, 1870-1914, by A. H. Fay, Bul. 115, Bureau of Mines, 1916, p. 10.

[2] Summation based on State mine inspectors' reports.

[3] Calculated on basis of production represented by inspection States.

[4] Bureau of Census.

[5] Bureau of Mines.

[6] Subject to revision.

From the above table it will be noted that the fatality rate per 1,000 men employed was 5.93 in 1870 and 2.95 in 1915.

Classifying accidents by causes, based upon reports from inspection States only, it is shown that 24,391 (46.74 per cent) of the 52,187 fatal accidents resulted from falls of roof and pillar coal, the fatality rate being 1.60 in 1870 and 1.48 in 1914. The average fatality rate during the 44-year period, 1870 to 1913, was 1.554. The fatality rate due to mine cars and locomotives was 0.412 in 1870 and 0.498 in 1914, with an average of 0.408. More than 12 per cent of all accidents were due to this cause. With reference to gas and dust explosions, the fatality rate was very erratic during the period under consideration. In 1887 it reached the lowest point, 0.096, and in 1907 it rose to 1.417, with a per cent of fatality due to this cause of 29.49. The per cent for the 45 year period was 13.87. Accidents due to explosives show a decrease, the fatality rate in 1870 being 0.225 and in 1914, 0.191, the percentage for the 45-year period being 7.41. The fatality rate due to shaft accidents has been gradually decreasing, the rate per 1,000 men employed, in 1870 being 0.758, while in 1914 it was 0.115. The average percentage is 3.68. The number killed per 1,000 men employed averaged for the 45-year period, is 3.31; in 1914 it was 3.22, and in 1915 it was 2.95. The following table shows the number killed, by specified causes, in 1870 and in 1914, and for each quinquennial period, 1871 to 1915, inclusive:

NUMBER OF PERSONS KILLED BY ACCIDENTS IN COAL MINES, AND PER CENT OF FATALITIES DUE TO EACH CAUSE, AND RATE PER 1,000 EMPLOYEES, BY CAUSES, 1870, QUINQUENNIAL PERIODS 1871 TO 1915, AND IN 1914.

Causes and fatalities.	Year.	Period.									Year.
	1870	1871–1875	1876–1880	1881–1885	1886–1890	1891–1895	1896–1900	1901–1905	1906–1910	1911–1915 [1]	1914
Falls of roof and pillar coal:											
Number killed	57	461	659	1,068	1,539	2,391	3,065	4,425	5,886	5,917	1,131
Per cent	27.01	37.91	50.97	44.19	49.22	47.77	52.26	46.82	44.30	(2)	46.10
Number per 1,000 employees	1.601	1.631	1.384	1.261	1.176	1.393	1.541	1.617	1.744	(2)	1.482
Mine cars and locomotives:											
Number killed	15	153	187	312	386	558	645	1,065	1,599	1,904	380
Per cent	7.11	12.58	14.46	12.91	12.44	11.15	11.00	11.27	12.03	(2)	15.48
Number per 1,000 employees	.421	.541	.393	.369	.297	.325	.324	.389	.474	(2)	.498
Gas and dust explosions:											
Number killed	10	137	120	173	297	743	730	1,524	2,388	1,822	349
Per cent	4.74	11.27	9.28	7.16	9.50	14.85	12.45	16.13	17.97	(2)	14.22
Number per 1,000 ployees	.281	.485	.252	.204	.227	.432	.367	.557	.708	(2)	.457
Explosives:											
Number killed	8	97	98	177	225	379	449	834	1,007	746	146
Per cent	3.79	7.98	7.58	7.32	7.19	7.57	7.66	8.82	7.58	(2)	5.95
Number per 1,000 employees	.225	.343	.206	.209	.172	.221	.226	.305	.298	(2)	.191
Miscellaneous, underground:											
Number killed	73	144	86	323	247	348	345	580	1,137	1,032	194
Per cent	34.60	11.84	6.65	13.36	7.90	6.95	5.88	6.14	8.56	(2)	7.91
Number per 1,000 employees	2.051	.510	.180	.382	.189	.202	.173	.212	.337	(2)	.254

[1] Figures reported for 1915 subject to revision.

[2] Not reported. Data for 1915 incomplete.

NUMBER OF PERSONS KILLED BY ACCIDENTS IN COAL MINES, AND PER CENT OF FATALITIES DUE TO EACH CAUSE, AND RATE PER 1,000 EMPLOYEES, BY CAUSES, 1870, QUINQUENNIAL PERIODS 1871 TO 1915, AND IN 1914—Concluded.

Causes and fatalities.	Year.	Period.									Year.
	1870	1871–1875	1876–1880	1881–1885	1886–1890	1891–1895	1896–1900	1901–1905	1906–1910	1911–1915 [1]	1914
Shaft fatalities:											
Number killed	27	87	39	124	176	231	226	368	382	303	88
Per cent	12.80	7.15	3.02	5.13	5.63	4.62	3.85	3.89	2.87	(2)	3.58
Number per 1,000 employees	.758	.308	.082	.146	.135	.134	.114	.135	.113	(2)	.115
Surface fatalities:											
Number killed	21	137	104	240	254	355	405	655	889	856	166
Per cent	9.95	11.27	8.04	9.93	8.12	7.09	6.90	6.93	6.69	(2)	6.76
Number per 1,000 employees	.590	.485	.218	.283	.194	.207	.204	.239	.263	(2)	.218
Total:											
Number killed	211	1,216	1,293	2,417	3,127	5,005	5,865	9,451	13,288	12,580	2,454
Number per 1,000 employees	5.927	4.303	2.715	2.854	2.390	2.914	2.949	3.454	3.937	(2)	3.215

[1] Figures reported for 1915 subject to revision.

[2] Not reported. Data for 1915 incomplete.

The report comments on, and illustrates by charts, the reduction in fatality rates since the establishment by many of the States, beginning with Pennsylvania in 1870, of mine inspection service. From 1880 to 1897 the fatality rate per 1,000 men employed remained practically stationary. From 1897 to 1907 the rate increased considerably, reaching the highest point in 1907, but since that year there has been a marked decline.

The increasing fatality rate due to mine disasters, from 1897 and culminating with 1907, has been the means of the passage of more stringent laws concerning the operation of coal mines. Every disaster is thoroughly investigated by State and Federal authorities, as well as by the local engineers of the operating company, to determine the exact cause, so that similar disasters may be prevented in the future. States are establishing rescue and first-aid stations, and nearly every large mining company has its safety engineer and safety-first committees with the necessary rescue and first-aid equipment. An educational campaign on mine-accident prevention has been conducted since 1907, with the result that there is much closer cooperation of miner, foreman, operator, and inspector than in former years. Permissible explosives and improved types of safety lamps have been introduced into many of the mines. Explosibility of coal dust has been studied and precautions adopted to render the dust inert. The work of these various agencies has resulted in a gradual decline in the fatality rate from 1907 to 1914.

Fatality rates prepared by the Bureau of Mines are calculated on the basis of the number of men employed, regardless of the number of days employed during the year. This method, it is explained, is faulty to the extent that under existing conditions it is not possible to obtain the exact number of men at work for the reason that all of the men do not work throughout the year. The tonnage basis of comparison, it is suggested, is hardly fair because mining conditions are not the same in all the States.

Still another method of computing fatality rates, and one which it is believed gives the true hazard rates, takes into account the number of men and the time they are engaged in the hazardous occupation. This necessitates reducing all labor to a standard year of a certain number of hours, and the Bureau of Mines in this report has taken as a basis a year of 2,000 hours, or 200 10-hour days, on the ground that this appears more nearly to approximate the average length of time coal mines in the United States are operated during the 12 months. The use of the 2,000-hour year, however, gives rates which are too low for fair comparison with those for other industries and other countries computed upon the basis of the 3,000-hour year which has been formally adopted by the International Association of Industrial Accident Boards and Commissions, the International Congress on Social Insurance, and the International Statistical Institute, and which has long been in use in a number of European countries. The fatalities per 1,000 men employed on the basis of actual days worked, and also on the basis of 300 10-hour days for the period 1903 to 1914, except 1909, for the 24 States reporting, were as follows:

FATALITY RATES IN COAL MINES OF THE UNITED STATES 1903 TO 1914.

Year.	Per 1,000 men actually employed.	Per 1,000 300 10-hour day workers.	Year.	Per 1,000 men actually employed.	Per 1,000 300 10-hour day workers.
1903	3.46	4.97	1909	3.96	(1)
1904	3.48	5.96	1910	3.89	6.05
1905	3.63	5.87	1911	3.65	5.67
1906	3.39	5.58	1912	3.35	4.98
1907	4.81	7.31	1913	3.73	5.37
1908	3.60	6.42	1914	3.22	5.31

[1] Data not available.

The following table presents, by States, for the period 1903 to 1913, inclusive, except 1909, the fatality rates based upon the number of 3,000-hour workers as compared with the rate based upon the number of men reported as employed:

FATALITY RATES BASED ON THE NUMBER OF 3,000-HOUR WORKERS AS COMPARED WITH THE RATE BASED ON THE NUMBER OF MEN REPORTED AS EMPLOYED (1903-1913, INCLUSIVE, EXCEPT 1909).

State.	Days worked per year (10-hour).	Actual number of men employed (10-year period).	Number of 3,000-hour workers.	Total fatalities for 10-year period, excluding 1909.	Fatalities per 1,000.	
					Actual employees.	3,000-hour workers.
Alabama	225.5	211,382	158,876	1,379	6.52	8.67
Arkansas	131.4	[1] 39,006	16,408	92	2.36	5.61
Colorado	217.2	123,713	89,581	1,077	8.71	12.03
Illinois	156.7	664,866	347,368	1,701	2.55	4.89
Indiana	148.7	209,054	103,635	459	2.20	4.43
Iowa	170.4	157,415	89,418	305	1.94	3.41
Kansas	156.4	124,576	64,954	336	2.70	5.18
Kentucky	188.5	187,589	117,861	418	2.23	3.54
Maryland	242.8	[1] 47,611	38,638	104	2.18	2.69
Michigan	162.0	35,454	19,148	65	1.83	3.39
Missouri	153.9	95,056	48,769	124	1.30	2.55
Montana	193.0	29,887	19,227	122	4.08	6.35
New Mexico	246.3	29,776	24,446	433	14.54	17.72
North Dakota	197.4	[2] 3,188	2,162	13	4.08	6.02
Ohio	149.5	452,089	225,260	1,331	2.94	5.91
Oklahoma	140.6	84,418	42,007	429	5.08	10.22
Pennsylvania (anthracite)	198.5	1,668,725	1,103,973	6,219	3.73	5.64
Pennsylvania (bituminous)	203.4	1,573,200	1,066,562	5,340	3.39	5.01
Tennessee	210.0	112,247	78,580	381	3.40	4.85
Texas	210.1	[3] 19,405	13,364	21	1.08	1.58
Utah	210.9	25,084	17,633	104	4.15	5.90
Virginia	244.7	[3] 33,211	28,368	224	6.74	7.89
Washington	202.3	55,641	37,527	258	4.64	6.87
West Virginia	213.2	582,525	413,929	3,219	5.53	7.77
Wyoming	213.7	[3] 39,171	24,653	211	5.38	8.57
Total and average	190.9	6,604,289	4,192,347	24,365	3.69	5.81

[1] Employees and fatalities for eight years only.
[2] Employees and fatalities for five years only.
[3] Employees and fatalities for four years only.

Of 52,187 fatalities during the period 1870 to 1914, inclusive, 7,013 (13.44 per cent) were killed in exceptional accidents—that is, those in which 5 or more men were killed at one time—and 45,174 (86.56 per cent) were killed in common accidents—that is, those in which less than 5 men were killed at one time.

The report suggests the unsatisfactory character of statistics showing nonfatal accidents in coal mines, owing principally to the fact that no complete records exist. Based, however, upon reports submitted by 17 State mine inspectors, covering the year 1913 or the nearest year for which the record was available, 6,719 nonfatal accidents are tabulated. Of these, 2,860 (42.57 per cent) were caused by falls of roof or pillar coal, and 1,992 (29.65 per cent) were caused by mine cars and locomotives. The following table shows the number and per cent of injuries received by employees in and about mines, by part of body affected, and is included in the report for the assistance it may render the hospital department of various coal mines in pointing out the part of the body receiving the most injuries, thus giving the surgeon and others an idea as to the surgical equipment necessary properly to take care of injuries to be expected in and about coal mines.

NUMBER AND PERCENTAGE OF INJURIES RECEIVED BY MEN EMPLOYED IN AND ABOUT COAL MINES, BY PART OF BODY INJURED.

Part injured.	Number.	Per cent.	Part injured.	Number.	Per cent.
Head	427	6.36	Hip and pelvis	281	4.18
Face	290	4.32	Legs	1,987	29.57
Shoulders	330	4.91	Feet	722	10.74
Arms	544	8.10			
Hands	948	14.11	Total	6,719	100.00
Body	1,190	17.71			

WORKMEN'S COMPENSATION LAW OF CUBA.

The most recent addition to the extensive list of countries having compensation laws is the Cuban Republic, which by its act of June 12, 1916, adopted this method for redress of injuries to employees in both private and public employments. The law is of the broadest application, including industries and employments in which more than 5 persons are regularly engaged, and extending to supervisory employees whose wages are not in excess of $3 per day and to apprentices whose only reward for labor is instruction.

The amount of earnings to be used as a basis of awarding compensation benefits may not exceed $1,095 per year, and the earnings of minors under 18 years of age or of apprentices not receiving wages shall be considered as not less than the average earnings of workmen engaged on the same work. Accidents are not compensable if intentionally caused, nor unless disability continues for at least two weeks, but if incapacity extends beyond two weeks, compensation is payable from the date of the injury.

Permanent total disability is compensated by the payment of a sum equal to two-thirds of the annual earnings of the injured person, and permanent partial disability by the payment of one-half the diminution of the annual earnings. Temporary disability is compensated by the payment of an amount equal to one-half the earnings of the injured man at the time of the accident, payments being made for each day, including Sundays and nonworking days, that the disability continues. For fatal accidents the widow receives 20 per cent for life or until remarriage, with added amounts in case of surviving children up to a maximum of 60 per cent where there are 4 or more. If children alone survive, 50 per cent of the earnings is the maximum amount payable. Other beneficiaries may be ascendants and brothers and sisters, payments to whom may not exceed 30 per cent in the aggregate, in the absence of nearer dependents. Payments to children or grandchildren cease when they reach majority unless they are incapacitated physically or mentally for self-support; to ascendants at their death, and to brothers or sisters at the age of 18 or on contracting marriage. Provision is also made for lump-sum payments.

A technical commission is created whose duty it is to list and recommend safety devices; the establishment of a safety museum is also provided for. Compensation may be increased one-half in cases of accident occurring in establishments not provided with the prescribed safety devices.

The usual provision is made against waivers, and any effort of the employer to impose costs on the employee is strictly forbidden. Insurance is prescribed unless capacity for self-insurance is established. Medical and funeral expenses are to be met by the employer, the injured man having the right to choose his own physician and pharmacist, but the charges must be approved by the municipal judge of the district.

Accidents must be reported within 24 hours, and claims prosecuted within one year. Methods of procedure are carefully laid down, and special provision is made in behalf of seamen.

The act compares favorably with other laws of its class, both in liberality and in administrative provisions, though no commission for its administration is provided for. It is to take effect in six months after its promulgation.

VOCATIONAL EDUCATION SURVEY—NEW ORLEANS.[1]

The gift to the city of New Orleans by Mr. Isaac Delgado of approximately $800,000 for the establishment of a central trades school for the mechanical training of boys, led to the inauguration in September, 1913, of a vocational survey of local industries to determine just what trades need to be taught to promote the welfare of the industries and the youth, and the scope of the curriculum to be offered in order that those boys who enter industrial life may be properly trained for the occupations they have chosen. The purpose of the survey also was to direct the intelligent interest and cooperation of employers and employees with regard to local problems of vocational education; to find out how to offer new opportunities for the hundreds of unemployed boys leaving the elementary schools; to discover how the industrial prosperity of the city may be promoted by means of vocational education; to determine prevailing types of industrial and trades schools in other cities, and to ascertain what kind of teachers, rooms, shops, buildings, and equipment are necessary to carry out the program agreed upon. The results of the survey, which was conducted by the Division of Educational Research of the Department of Superintendence of the Public Schools, are presented in two parts. Part I includes information useful in articulating the proposed trades school with existing conditions in the public schools, involving analyses of facts regarding enrollment, elimination, progress, and repeating of boys in the grades, and regarding night schools. Part II bears the title "Industry and Education," and is a detailed study of representative local manufacturing establishments, of the mechanical occupations of boys and men therein, and of the building trades in New Orleans.

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[1] Vocational survey for the Isaac Delgado Central Trades School. Part I, Facts about the public schools of New Orleans in relation to vocation. New Orleans, 1914, 58 pp. Part II, Industry and Education, New Orleans, 1916. pp. xiii, 409, v. Illustrated.

A portion of Part I is devoted to a series of tables indicating for all white schools, all colored schools, and for two typical schools, covering the first term of the school year 1913-14, the percentage of children over age in the different grades on account of lost time, over age on account of slow progress, at or below age but making slow progress, at or below age with usual or rapid progress, and repeaters. These tables indicate a large proportion of boys over age on account of slow progress.

Supplementary data for 1915 show that 42.2 per cent of the boys and 35.8 per cent of the girls among 28,512 white children enrolled during 1914-15 were over age for their grades. Of 8,081 colored children, 69.2 per cent of the boys and 70.8 per cent of the girls were over age.

A special study was made of 13-year-old boys, of the occupations of their fathers, and of teachers' impressions of boys' aptitude for trade work. Applying the "station in enrollment" index of efficiency, that is, ascertaining the percentage of 13-year-old children in or above Grade VII of the elementary schools, it was found that during 1914-15 the indexes were lower for white boys than for white girls (26 per cent and 39.1 per cent, respectively); that this index of efficiency for colored children was excessively low.

In the study of the dropping out or elimination of children from the public schools, it was found that approximately 70 per cent of the white boys leave before completing the eighth grade, and that over 70 per cent of the colored boys leave before completing the sixth grade; that a small per cent of those who enter elementary grades ever finish high school; that the eliminated pupils are untrained workers and hundreds of boys and girls enter industry without training or aim.

The occupational history of 1,472 boys and men in the night schools was ascertained, and of 1,232 schedules tabulated, the largest number, 289 (23.47 per cent), was employed as clerks, and the next largest number, 165 (13.39 per cent), was employed as office boys. The stated ambitions or desired occupations of this same group were recorded with a view to better provisions for training, and of 1,350 schedules tabulated the largest number, 162 (12 per cent), expressed a desire to be mechanics or machinists, 132 (9.78 per cent) wanted to be bookkeepers, and 115 (8.52 per cent) wanted to be engineers. Almost half expressed a preference for such trades as would be taught in a trades school.

The attitude of approximately 150 employers toward evening, part-time, preparatory, and practical day trade schools was ascertained. The result of this inquiry developed that 51 per cent favored evening schools, 43 per cent favored part-time classes, 48 per cent favored public industrial or preparatory schools, and 50 per cent favored practical day trade schools.

In the survey of approximately 100 typical establishments in New Orleans to determine the need for vocational training of workers, as a basis for the outlining of a trade school curriculum, the results of which are set forth in Part II, the aim was to give a detailed and accurate account of the occupations in each important group of local manufacturing industries, including metal manufacturing, power, light, and heating plants, and related occupations; electrical manufacturing and construction, telephones, telegraphs, and related occupations; lumber, its manufacture, and related occupations; the local building trades; printing and publishing and related occupations; a group of miscellaneous industries and occupations and mechanical occupations under city government. In studying an establishment effort was directed toward obtaining facts covering designations, processes, skill, and knowledge required, steps of possible promotion, wages, hours of labor, hazards, etc.

Five sections of the volume present facts and considerations that were developed in the course of the survey. These include data concerning proposed cooperation with the United States naval authorities, some notes as to Gulf fisheries and conservation of the industry, and an outline of a practical course in sea-food culture, with a suggestion that the vocational opportunities offered by the Gulf fisheries should be further investigated.

Some doubt is expressed as to the advisability of establishing a school of scientific dairying and agriculture as a part of the trades school.

In considering the problem of establishing a Negro department, two questions presented themselves: "Did the founder intend that

Negro boys should be omitted from the benefits of the gift? In consideration of the fact that a 'central trades school' is specified in the will, can a separate department for Negroes be built in another portion of the city and convenient to the Negro population?" These questions are not specifically answered, but, with the thought of conserving the trades in which Negroes are particularly employed and to encourage the prospective workers, a recommendation is made that education for Negroes should be provided, as follows:

Night courses for workers now engaged in bricklaying, carpentry, and plastering.

A small Negro trades school should be provided with a practical curriculum based upon the above three trades and following the general organization of the regular preparatory trades department of the Delgado School. Whether the money for the Negro trades school be apportioned from the Delgado fund or from other sources, it is believed that such a school would supply a recognized want in our public-school system and render a good service to the Negroes and the whole community.

In a chapter on vocational guidance four facts developed by the survey relating to boys' jobs and life work are presented, most of the information being obtained from the 1,472 men and boys in night school to which reference has been made on page 75.

1. A very large proportion (85 per cent) of the children who leave school to go to work are 14 and 15 years of age.

2. The jobs or positions to which they go are, as a rule, not such as to impart increased skill and knowledge or ambition.

3. The majority of young workers do not possess even a complete common school education. Of 3,071 certificates issued by the factory inspector for the year ending December 31, 1914, to children in the public schools, 808 (26.31 per cent) of the children were in the fifth grade and 642 (20.91 per cent) were in the sixth grade. Approximately 76.45 per cent, 2,348 pupils,[1] had not gone beyond the sixth grade.

4. Wages earned during the first few years by the young workers are in numerous cases more closely related to their age than to their school standing. Under present conditions of employment and of school life there is little monetary incentive for the boys or girls, going into industry, to remain in school until 16 years of age rather than to quit at 14. Thus the average wage of 73 boys 14 years of age who had completed the fifth grade was $3.67, while the average wage of 27 boys 17 years of age who had completed the same grade was $7.73.

This inquiry also developed the fact that hundreds of boys at work desired training in the trades. Of 1,352 schedules, 950 (70.26 per cent) stated that they would have remained longer in school to learn a trade had such been taught.

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[1] This includes 7 pupils whose grade was unknown and 6 pupils who had had no schooling.

From the statements of 2,244 parents of pupils 13 years of age and over as to occupational preferences for them it was ascertained that (1) a fair majority of the boys (1,553, 69.21 per cent) have a definite occupation in view; (2) only 44 per cent of the parents intend to send their boys to high school, and less than 5 per cent intend to send their boys to college; (3) less than 12 per cent of the parents state that their sons have received any training in preparation for the occupation desired.

In this connection the report recommends the establishment of a bureau of vocational guidance for boys and girls, based upon the result of the survey. Such a bureau, it is suggested, demands the highest skill and tact for its administration. This bureau would organize and promote the work of the placement of boys and girls over 16 years of age in all of its phases, as (1) training for wise choice of occupation; (2) studying and disclosing industrial, commercial, and professional opportunities; (3) studying the individual's physical and mental capacities and needs; (4) promoting vocational training for successful occupation; (5) promoting cooperation between employers, employees, and civic organizations.

An outline of a proposed plan for cooperation between the public schools and local industries is presented, this plan proposing—

> 1. The enlargement of educational work by the public schools in the interest of vocational choice, training for same, and dissemination of knowledge concerning vocational opportunities for the benefit of the youth of New Orleans; (2) active, organized cooperation with the business organization and business men to this end; and (3) assumption by such associations of a portion of the expense of conducting the bureau of vocations.

Based upon the systematic survey of the representative daily occupations, operations, duties, hours of labor, wages, processes and physical and mental conditions that make up the life of the majority of boys who leave school to go to work, a tentative course of study or system of instruction, within the compass of the allotted sphere of the Delgado school, is presented in detail. This includes examples of general programs and distribution of shop practice and theory in public and philanthropic trades schools, with illustrations of trades schools in operation in certain cities of the United States, Germany, France, and Ireland. It was decided that the course should be adapted to the needs of (1) boys of 14 years of age and older who usually will go no further than the sixth grade in the elementary schools; (2) older and more advanced boys in smaller numbers; (3) youths and men in industry who desire either to improve their skill and knowledge or to change their occupations by means of unit evening courses and part-time courses. Accordingly a plan was developed for the organization of the school into two departments: First, a preparatory trades department for boys from 14 to 16 years of age, not for the purpose of teaching a trade, but to interest and hold the boy and give him a knowledge of different mechanical industries so that he may be led to choose a definite vocation or trade at the age of 16. Second, a practical trades department for the intensive teaching of trades in whole or in part, this department to contain five divisions—metal working, building, woodworking, operative engineering, and printing. For the unit evening classes and part-time work a wide range of courses is indicated, based upon local needs and the experience of other cities.

For the administrative control of the school a plan is outlined proposing to establish an associate council, to which no member of the board of school directors shall be eligible except in an ex officio capacity, composed of two active manufacturers of the city, two active wage earners, and two other citizens chosen for ability, education and interest in industrial training. This associate council shall assist the board of school directors "in a manner * * * conserving the welfare of boys, and in sympathetic intelligent touch with employees and employers in the mechanical trades and industries of New Orleans."

> It should endeavor to see to it that the distinctive function of the Delgado school shall be the practical training of boys in mechanical trades, although some of the work may include practical English, shop mathematics, mechanical drawing, sanitation and hygiene. * * * Especially is it desirable that the associate council should labor to bind together continually the regular school system, the best civic interests of our industries and of our wage earners, and the work of the Delgado school. The associate council shall appoint advisory committees from each of the industries or trades represented in the course of the Delgado trades school, and these committees may be called upon from time to time for advice or information regarding the trades and industries represented by them. * * * Each advisory committee shall consist of four representative men of good character, two employers, and two wage earners for each committee. * * * A director of the Isaac Delgado Central Trades School should be elected by the board of school directors after thorough going investigation throughout the country to find the best men, and with the advice of the associate council and upon nomination by the superintendent of schools.

CIVIL SERVICE PENSIONS IN NEW YORK CITY.

In a recent report[1] the New York City pension commission analyzes numerous "defects in the operation of the present mass of contradicting provisions of the city's nine pension funds," and finds that from the point of view of equity to employees and efficiency of service the system discriminates between employees in different branches of the service and between individual members of each fund; that it offers inducement to 37 per cent of the employees of the city to retire in the prime of life; it burdens 43 per cent of the service with superannuated employees; it makes possible the expensive and demoralizing "excess" pension; it makes possible the absurd practice of reemployment by the city of its own pensioner; it makes inadequate and insecure provision for employees in case of injury or death resulting from duty; it pensions dependents of employees whose death is not due to the performance of duty without realization of the financial obligation; and, finally, it does not make general or uniform participation on the part of the employees in the pension cost.

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[1] See p. 95.

From the point of view of financial soundness, the commission finds that the plans for the existing pension systems were launched without knowledge of their ultimate cost; that the city's support was disguised by means of indirect sources of revenue; that of the nine plans, four had unlimited funds backed by the appropriating powers of the city, and were consequently likely to impose an intolerable burden upon the city; and that the five limited funds were so organized as eventually to become exhausted.

From the point of view of administrative efficiency, the commission points out a lack of uniform policy for the municipal service; lack of security due to frequent changes in administration; and a lack of a proper system of records, which is a serious handicap to scientific management of a fund.

On the other hand, it should be noted that for each of the defects thus uncovered the commission points out a remedy, and throughout the report constantly emphasizes the need and justification of a sound pension scheme. There is no thought of abandoning the pension principle, in spite of the fact that the existing plans were deemed so illogical and so serious in their shortcomings as to require an entire new system, rather than a patching up of the old ones.

Therefore, before proceeding to the elaboration of a single coherent pension scheme covering all of the employees of the city of New York, the commission points out the economic justification of a system of retirement. Such a system would facilitate removal from the service of those who can not perform satisfactorily the duties of their position by reason of superannuation or other forms of disability; it would clear "the lanes of promotion for the young and ambitious"; secure adequate protection for the employees against such risks of life as old age, disability, death, etc., protection "which can not be obtained by the individual through saving or commercial insurance at rates as low as a pension plan makes possible"; promote the good will of employees and induce them to put forth their best efforts; eliminate appeal for charity and favoritism; and enable the government to compete with other public and private employers having pension systems in securing and keeping high-grade men and women in public service.

The commission takes the view that any pension plan which may be adopted by the city should rest upon equal contribution by the city and the employee. A study of pension systems in the United States and abroad points to the fact "that the development of pension measures as a result of an experience of over a hundred years is in the direction of equal division of cost between the employer and the employed, and that this tendency applies equally to systems for public employees and for industrial workers."

Such a system of joint contribution, it is contended, has the practical advantage of securing adequacy and security of benefits, promotion of good will of employees, and protection to the dependents of a deceased employee. A contributory system also offers inducement to an employee to remain in the service, but at the same time does not unduly restrict his independence by fear of entirely losing the benefits accrued after years of service. Furthermore, it facilitates the discharge of the inefficient because it does not leave the dismissed without any economic support—a condition demoralizing in its influence.

The commission finds that "it has been demonstrated by actual experience that voluntary plans are ineffective," and is apparently, therefore, in favor of the compulsory application of any system that may be adopted. It also urges equality in the application of the pension principle to the entire municipal service.

As to the details which may be included in any system that is adopted, the commission suggests the following:

Superannuation retirement.—Retirement age varying in accordance with the occupational group to which an employee belongs. It would, for example, be advisable to retire a policeman or a fireman at an earlier age than a clerk or a teacher. The commission suggests a uniform proportion of the average yearly compensation for the last 10 years for each year of completed service as a proper basis in determining the amount of pension on the ground that the pension should be increased with length of service.

Disability retirement.—A minimum service of 10 years is recommended as a proper limitation for eligibility to this class of benefits. The disability retirement should be at a lower proportion of the average compensation "so as to establish a safeguard against the improper use of disability provisions for early retirement." Periodical physical examinations and effective rules for the return to duty of disability pensioners are also suggested.

Return of contributions.—As interpreted by the commission, experience of the majority of pension funds is said to point to the advisability of refunding contributions to employees who leave the service before eligibility to a pension.

It is suggested that additional protection be offered to the dependents of employees by permitting the purchase of annuities at cost.

Principles of administration and management of any retirement system should call for freedom from consideration of departmental expediency in interpreting the provisions of the law; uniform application of the system to all employees of the municipal service; a continuity of policy; judicious investment of funds for the accumulation of adequate reserves; economy in management; continuous study of the different actuarial elements affecting the sufficiency of contribution to insure the payment of all indebtedness; continuous study of the practical operation of the system; continuous study of the disability phases of the system in order to secure better legal definitions and to improve the rules governing the examination of disability pensioners; and, finally, definite responsibility for the satisfactory operation of the system which would make possible amendments in the original law whenever it was found to have become defective. This implies administration by an independent commission or board with considerable discretionary authority.

EFFECT OF THE WAR UPON RAILWAY LABOR IN GREAT BRITAIN.

The report of the general secretary of the National Union of Railwaymen in Great Britain to the annual general meeting of that body held in Bath June 19–23, 1916, shows that war conditions have made necessary considerable increases in wages of operating employees. A war bonus of 3s. (73 cents) per week was secured in 1915 for men whose weekly earnings were under 30s. ($7.30) and 2s. (49 cents) to those whose weekly earnings were 30s. ($7.30) and over. Later negotiations with the general managers of the railroads in June, 1915, resulted in a bonus of 1s. 6d. (36.5 cents) per week to employees under 18 years of age engaged in train operation. As the cost of living continued to increase, further increases were secured by negotiations in October, 1915, with the result that the bonus was increased to 5s. ($1.22) per week for adults and 2s. 6d. (61 cents) per week for boys under 18. While this agreement is in effect, the union agrees not to present or support new demands for improved conditions. The secretary states with regret that every effort has failed to have the war bonus extended to railway men in Ireland.

Additions to the ordinary earnings of shop men effective since July, 1915, amounted to 4s. (97 cents) per week on time rates and 10 per cent on piece rates.

There has been a marked increase in the number of women employed upon British railways as a consequence of the war. This increase in the employment of women has been acquiesced in and controlled by the railway trade-unionists. A special committee of the union took the matter up with the general managers of the railroads and settled the terms upon which women were to be employed.

> It was agreed that their employment was an emergency provision and would not prejudice in any way any undertaking given by the companies as to the reemployment of men who had joined the colors on the conclusion of the war; that their employment in capacities in which they had not previously been employed is without prejudice to the general question of the employment of women; and further, that they be paid the minimum of the grade.

Prior to the war, women had been employed in small numbers as coach cleaners, but since then the list of occupations which they have filled has been very much extended.

PROPOSED MINISTER OF LABOR IN GREAT BRITAIN.

The Trades Union Congress in Great Britain, analogous to the convention of the American Federation of Labor, at its session in Bristol extending from September 6 to 11, 1915, passed an important resolution calling for the appointment of a minister of labor, under whose head would be coordinated all labor matters in which the Government is concerned. The mover of the resolution, a member of the dock, wharf, and riverside workers union, pointed out the difficulty experienced in going from one department of the Government to another in regard to matters concerning the interests of labor. "In view of the changing conditions which the war is imposing upon the industries of the country," he continued, "I hope the parliamentary committee will press for this resolution to be put into operation at once. * * * I suggest that the new conditions forced upon labor make it additionally imperative that this ministry of labor should be set up immediately."

The resolution, which was carried unanimously (Sept. 11, 1915), reads as follows:

APPOINTMENT OF MINISTER OF LABOR.

> This congress calls upon the Government to appoint a minister of labor with full Cabinet rank. That all departments of labor shall be coordinated under the said minister's supervision, and to include a statistical department, which shall enumerate the number of persons employed in the United Kingdom, stating sex, young persons, and children engaged in industrial occupations. The department shall prepare a monthly statement indicating (1) the number of persons employed; (2) (*a*) number

of persons regularly employed; (*b*) casually employed; and (*c*) the number unemployed in any one week. A statement to be prepared monthly dealing with the average wages of persons permanently employed, irregular, and casually employed. A statement also to be prepared of the changes in wages and conditions of employment.

ADMINISTRATION OF FACTORIES ACTS, ETC.

Factory act, mines, docks, railway regulations, provisions for "dangerous," "unhealthy" occupations to be supervised by minister, together with staff of inspectors occupied in the administration of any act or regulation of labor under the Government.

EXCHANGES, REGISTRATION, ETC., RE UNEMPLOYMENT.

Exchanges, registration agencies dealing with local or national unemployment to be administered by the labor minister.

INDUSTRIAL ARBITRATION AND CONCILIATION.

A national department of industrial arbitration and conciliation to be under the control of the minister.

LABOR LEGAL DEPARTMENT.

A legal department to be established dealing with trade-union law and registration of trade-unions and all acts affecting the industrial life of the workers.

SCHEMES DEALING WITH UNEMPLOYMENT.

National scheme dealing with unemployment: (*a*) Unemployment insurance; (*b*) schemes dealing with afforestation, coast erosion, land reclamation, canal restoration, deepening, etc., military roads, or other forms of useful work to be included in the labor minister's administration.

PROVISION FOR RELIEF OF DISTRESS.

Provision for relief, feeding, housing of unemployed and their families to be administered by the labor minister of state.

All powers, acts, and authorities dealing with labor interests and all machinery to be consolidated. Departments pertaining thereto to be in charge of the minister appointed.

It may be interesting to note that the congress of British trade-unionists referred to above was said to be one of the most important and most largely attended of the 47 congresses which have been held annually since 1868, there having been no meeting in 1914. It was composed of 610 delegates, representing over 2,680,000 trade-union members. It was the first congress in history to be addressed by a cabinet minister, Mr. Lloyd George appearing before it to emphasize the importance of the support of labor in the prosecution of the war. Regret was expressed that it was the first congress since 1894 at which delegates fron the American Federation of Labor did not appear.

ARBITRATION AND CONCILIATION IN AUSTRALASIA.[1]

In an attempt to give an account of the actual development of the principles of conciliation and arbitration in labor legislation in

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[1] Arbitration and conciliation in Australasia, by Mary Theresa Rankin. London, 1916. 192 pp.

Australasia, the author has confined herself to the experience of Victoria and New Zealand, covering more than 20 years. In Victoria conciliation has been effected through a wages board system, established in 1896 originally for the purpose of preventing sweating in certain disorganized or weak trades. In New Zealand the motive for providing an arbitration system is stated to be the abolition of strikes and the promotion of good industrial conditions. In the volume under review the author shows how far both systems have been diverted from their original purposes. The wages boards in Victoria the author regards as a compromise between a system of voluntary conciliation boards with legal enforcement of agreements and a compulsory arbitration system. No attempt has been made to force labor to accept an unwelcome award, and the limitation of compulsory arbitration in this respect has been openly recognized. The Government has undertaken the duty of legislating as regards wages but it does not suppose that the rates fixed are "right" in the sense that their acceptance is ethically and equally binding upon both employer and employed. Neither employer nor employee may pay or receive a lesser rate than that fixed by the board, but no penalty attaches to employees who, by means of a strike, endeavor to force the employer to pay a higher rate. In New Zealand the recognition of this powerlessness to enforce the acceptance of awards is not admitted but experience seems to show that it is sufficiently apparent.

> The conclusion seems unavoidable that compulsory arbitration leads to a demand for relatively high standards of efficiency, and yet in its operation tends to produce a standard relatively low. The gravity of this tendency up to the present has been mitigated by a real scarcity of labor, and by the fact that there are still unregulated trades which help to solve the problem of the inefficient worker.

The author states that the original purpose of the wages boards in Victoria has been lost sight of and that the reasons which now prevail for the formation of these boards appear to be on the part of employers "usually unfair competition," and on the part of employed, "low wages and often the employment of excessive juvenile labor." Their powers are limited to fixing minimum wages and piecework rates, regulation of hours, and the proportion of juvenile workers, the fixing of special rates for the incompetent where it may seem just and expedient to do so, and the regulation of the expansion of industry throughout the State.

In 1912 there were 111 boards in existence, affecting 130,000 workers, 70,898 being employed in factories and the remaining 59,102 in other trades and business. As to the cost of these boards, it is stated that "no cheaper machinery for the legal settlement of industrial questions could well be provided."

In tracing the effect of wages boards determinations on the six so-called "sweated trades"—boot, furniture, bread, clothing, shirt, and underclothing—the author states that there is ample evidence that, in the years immediately following regulation of wages, the legal rates, where possible, were evaded, and even where legal rates were paid, sweating in the form of speeding-up was a frequent complaint. Instances are cited where employees themselves, earning more than the minimum rate, have agreed to take the minimum wage or even less because of a fear that they might not get work or that others willing to take any wage would be employed in their stead.

The amelioration of conditions in these trades seems to have depended upon relative depression and underpayment in each trade, the height of the legal rate fixed relative to the depth of depression, and the supply of labor in the trade. That undue advantage was taken of the general depression and surplus of labor just prior to the institution of the wages boards, resulting in the payment of lower rates than was compatible with the carrying on of the trade, appears to be a fact, but the author admits the difficulty of discovering to what extent this was true of any of the trades. The bread trade and the Chinese furniture trade are mentioned as illustrative of what constitutes the most reprehensible form of sweating, namely, the persistent attempt to make profit out of wages.

> If legal rates are to have any meaning and function at all, it is just here, and yet there has been undoubtedly much greater failure than success. The reason is obvious. Such regulation is purely negative. It does not touch the cause "to sweat" nor the cause "to be sweated." So long as both these remain there is temptation to collusion "and the union of the two classes who are personally concerned in the question must inevitably nullify the board's award." The presuppositions on which a legal rate rests are: (1) That the majority of employers are able to pay it; (2) if there is a minority who are quite unable to do so, their employees will be able to find work elsewhere. Unless both these presuppositions are, as a matter of fact, to a considerable extent, true, sweating remains unaffected by the legislation. It might of course be objected that before putting such legislation into force it is impossible to know whether the necessary conditions exist or not. But the very prevalence of low rates and of long hours in every trade tends to prove they do not exist * * *.

The effect of wages boards on wages has been to increase the average paid. Reports for 1912 indicate that since the formation of the various boards the increase in the average weekly wage has ranged from £1 ($4.87) in the case of bakers and coopers to 3s. 10d. (93.3 cents) and 3s. 3d. (79 cents) in those of women tailors and milliners. However, "there is no reason to suppose that the whole increase in any one case is due to the influence of the special boards alone. Mainly owing to the increasing prosperity, the general rate of wages in nonboard as well as in board trades has been steadily rising."

The extent to which special boards have affected wages seems to depend upon the circumstances of each industry and of the same industry at different times, and also whether the determination constitutes a rise in the standard of wages or a mere leveling process by which the wages of certain workers are raised to the level of those more competent. Usually a first determination means a rise in the standard, and future amendments mean the process of levelling up. The average adult wage returns seem to show in most cases an advance whenever the minimum rate has advanced, although not to the same extent. For example, the clothing trade in 1910 raised the weekly minimum rate 1s. 6d. (36.5 cents), but the average adult wage only rose 6d. (12.2 cents.)[1] Again, in the boot trade at the end of 1902 the minimum wage was raised from 42s. ($10.22) to 45s. ($10.95) per week, but the average adult wage in 1904 had risen only 1s. 5d. (34.5 cents) and in 1906 only 1s. 7d. (38.5 cents) over that of 1902. Not till 1907 did the average adult wage rise to the extent of the rise in the minimum, viz, 3s. (73 cents).

Prior to the board's determination in the clothing trade the average weekly wage for females was 15s. 5d. ($3.75); after the determination it was 18s. 6d. ($4.50). In the shirt trade the minimum wage was fixed at 16s. ($3.89), and "a considerable number of workers are reported to have been benefited by the award, though no great effect is traceable on the average wage returns." The underclothing board's award was also 16s. ($3.89), and "in many instances workers experienced a rise in wages, and were greatly benefited by the board's award." The increase in the average weekly wage as a result of the determination was 1s. 3d. (30.4 cents).

There is apparently no indication that the minimum wage has increased the cost of living.

A series of tables is presented, from which the accompanying table is compiled, showing for the boot, furniture, bread, clothing, shirt, and underclothing trades, by years from 1896 to 1911, except 1909, the changes in minimum-wage determinations, the average wage and average adult wage paid, and the number and per cent of apprentices. The table is divided into three periods—1896 to 1902, when restriction of apprentices was in force; 1903 to 1908, when the number of apprentices was not restricted; and 1910 and 1911, when restriction was again imposed—and indicates somewhat the extent to which the average wage was influenced by each minimum-wage determination and also by juvenile labor. In the clothing and furniture trades the minimum wage appears to have had two results, a great increase in juvenile labor and a marked complaint of the scarcity of really competent hands among adult workers. The first result is also noticeable to a lesser degree in the other trades, the great influx of apprentices occurring during the periods of no restriction.

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[1] This is the amount given by the author. The table on page 87 indicates a rise of 10d. (20.3 cents).

MINIMUM AND AVERAGE WAGES AND NUMBER AND PER CENT OF APPRENTICES, 1896 TO 1911.

Item.	Restriction of apprentices.							No restriction of apprentices.						Restriction.	
	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1910	1911
Boot trade (males):															
Minimum wage		$8.76		$10.22			$10.95						$11.68	$13.14	
Average wage	$6.53	$6.71	$8.19	$8.11	$8.37	$8.39	$8.54	$8.54	$8.37	$8.21	$8.31	$8.52	$8.88	$10.36	$11.13
Number of apprentices				809			702				1,252		1,379		898
Per cent of apprentices				36.0			30.8				37.7		39.9		23.0
Average adult wage					$10.32		$10.81		$11.15		$11.19	$11.82	$12.21	$13.55	$13.55
Boot trade (females):															
Minimum wage			$4.87										$5.11	$5.47	
Average wage	$3.24	$3.06	$3.55	$3.63	$3.55	$3.71	$3.57	$3.41	$3.37	$3.33	$3.45	$3.59	$3.71	$4.20	$4.77
Number of apprentices				594			694				1,074		1,199		960
Per cent of apprentices				51.0			54.0				57.0		52.0		39.0
Average adult wage					$5.31		$5.25		$5.23		$5.17	$5.25	$5.43	$5.64	$5.88
Furniture trade:															
Minimum wage		$10.95	$11.68										$13.63		$14.60
Average wage	$7.20	$8.68	$8.76	$9.44	$9.83	$9.77	$10.08	$9.67	$9.30	$8.88	$8.86	$8.35	$9.08	$8.94	$9.90
Number of apprentices			338	257			190				345		515		637
Per cent of apprentices			49.0	34.0			30.2				43.1		54.1		48.5
Average adult wage			$11.46	$11.96	$12.19		$12.41		$12.35		$12.88	$13.20	$14.03	$14.07	$15.01
Bread trade:															
Minimum wage			$11.68		$12.17								[1] $13.14		$14.60
Average wage	$7.42	$9.06	$10.20	$10.38	$10.71	$10.34	$10.56	$10.40	$10.24	$10.22	$10.56	$11.09	$10.99	$11.33	$13.26
Number of apprentices							174				233		182		160
Per cent of apprentices							25.9				36.2		25.7		21.9
Average adult wage					$12.63		$12.57		$12.75		$13.44	$13.40	$13.55	$13.50	$15.41
Clothing trade:															
Minimum wage			$4.87										$5.11	$5.47	
Average wage (females)	$3.75	$3.81	$4.44	$4.50	$4.40	$4.44	$4.44	$4.38	$4.16	$4.08	$4.08	$4.06	$4.12	$4.46	$4.79
Number of apprentices			784	950			1,194				1,917		2,122		2,508
Per cent of apprentices			22.0	24.0			28.7				38.6		40.9		38.8
Average adult wage			$5.29	$5.37	$5.23	$5.41	$5.41		$5.37		$5.43	$5.50	$5.56	$5.76	$6.12
Shirt trade (females):															
Minimum wage			$3.89										$4.87		$5.47
Average wage	$3.51	$3.55	$3.71	$3.73	$3.57	$3.57	$3.49	$3.61	$3.55	$3.57	$3.61	$3.79	$3.89	$4.48	$4.95
Number of apprentices							156				233				266
Per cent of apprentices							17.9				18.8				18.7
Average adult wage												$4.85	$4.87	$5.50	$5.52
Average piecework wage												$4.12	$4.12	$4.79	$5.15
Underclothing trade:															
Minimum wage				$3.89											$4.87
Average wage			$2.74	$3.00	$3.06	$3.02	$3.06	$3.02	$3.12	$3.00	$3.06	$3.14	$3.16	$3.37	$4.01
Number of apprentices							810				970				1,138
Per cent of apprentices							52.9				55.6				52.9
Average adult wage					$4.13		$4.30		$1.38		$4.56	$4.08	$4.72	$5.13	$5.76

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[1] Obtained by strike.

The author thus sums up the effect of the wages boards upon conditions and wages in various industries in Victoria:

> A careful consideration of Victorian experience forces the conclusion that the deeper the depression and the larger the supply of labor in any trade the more harmful is the introduction of a legal rate. At such time it operates entirely in favor of the more competent worker by excluding the less competent from competition.
>
> The minimum wage was adopted in Victoria for the purpose of protecting the weaker units in industry in a time of depression and surplus of labor, but it has depended for its success on conditions diametrically opposite. In prosperous times a certain amount of workers may receive the minimum wage, even although, strictly speaking, they do not earn it. The employer may make up the discrepancy out of the wages of better employees or out of his own profits. In a time of depression the employer has no such resources with which to keep wages above their economic level, and those who can not earn the minimum wage must either evade it or fall out of employment.

It is stated that the restriction of juvenile labor in some form has always been in the power of the Victoria wages boards, and seems to be regarded as a necessary concomitant of a minimum-wage system. The main reasons said to render this restriction necessary are, (1) it insures employment to the adult worker and prevents such a flow of labor into any trade as might endanger the minimum rate, and (2) it insures to the juvenile worker not only employment on reaching adult age, but also that proper training during the term of apprenticeship, which is necessary if the standard of skill in any trade is to be maintained, and the progress of industry in general secured. The establishment of this restriction in 1897, its removal in 1903, owing to a deficient supply of skilled workers, and its reimposition in 1910, owing to increasing deficiency of skilled workers, and ostensibly for the purpose of better industrial training are briefly outlined.

In 1894 the legislative assembly of New Zealand passed "an act to encourage the formation of industrial unions and associations, and to facilitate the settlement of industrial disputes by conciliation and arbitration." This act, as amended in 1908, 1910, and 1911, provides—

> That societies consisting of not less than 3 persons in the case of employers, or 15 in the case of workers in any specified industry, or industries in an industrial district, may be registered as an industrial union on compliance with the requirements for registration. "Any two or more industrial unions of either employers or workers in any industry may form an industrial association, and register the same under the act. Such registration enables any union or association (1) to enter into and file an industrial agreement specifying the conditions of employment agreed upon. (2) In the event of failure to arrive at an industrial agreement to bring an industrial dispute before a council of conciliation, set up for the purpose, and, if necessary, before the court of arbitration. Councils of conciliation are set up for each dispute as it arises, and consist of not more than three representatives of employers and three representatives of employed concerned in the dispute, with the commissioner for the district as chairman. The act provides for the appointment of not more than four conciliation commissioners to hold office for three years."

The arbitration court consists of a president, holding the status of a supreme court judge, and two assessors, respectively, elected by the unions of employers and workers. All decisions are by majority of the members present at the sitting. If equally divided the decision of the judge is final. There is no appeal from the decisions of the court except in questions beyond the scope of the act. Awards are administered by inspectors of mines and factories as inspectors of awards, and penalties are recoverable by suit of an inspector of awards or any party to the award or agreement, but there is right of appeal to the arbitration court.

It appears that the wages of women workers have been little affected by the arbitration act. As to the regulated trades there seems to have been much duplication of awards. For instance, the author cites 51 different awards covering 8 industries.

It is stated that arbitration in New Zealand, as in Victoria, has fixed a legal wage, which, regarded as a minimum, as the wage to be earned by the less efficient or marginal worker, "is harmfully high."

Figures are given showing a languishing state of industry in New Zealand due to "an artificially high minimum rate of wages," this latter statement, however, being somewhat modified by a statement from the report of the Department of Labor for 1910, indicating that 62 per cent of those employed were voluntarily paid above the minimum rate. Generally speaking, in spite of the multiplicity of awards mentioned above, the author conveys the impression that the tendency of the arbitration system has been to level wages and that its influence on the most competent workers and on efficiency in general has not been good.

In 1908 Mr. Aves[1] regarded the falling efficiency as indisputable.

> * * * it would be unreasonable to attribute it entirely to the arbitration act. But the tendency of the awards, making as they do for uniformity of remuneration, often on a time basis, is a contributory influence.

In presenting a brief history of the conciliation and arbitration act, as regards industrial relationships, the author says that from 1894 to 1900, "when labor was satisfied and capital harassed and distrustful," there were no strikes; from 1900 to 1906, "when labor became less satisfied and capital less distrustful," there were likewise no strikes; from 1906 to 1912, when labor was "in open revolt and capital endeavored to uphold the act," there were 63 strikes.

When the arbitration act was amended in 1908 it was stated in the debates that "strikes—or rather revolts you might say against the arbitration court—have been rather frequent of late, and a great cry has been made through the length and breadth of the country because there have been strikes. This law was never intended to prevent strikes, and never could, and neither this nor any other law ever could * * * the object is to discredit strikes because they are a national calamity."

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[1] Report to the Home Office, 1908, on wages boards and industrial conciliation and arbitration in New Zealand and Australia. p. 109.

In apparent contradiction of the last statement, and summing up the result of arbitration in New Zealand, the author says:

> The New Zealand arbitration act, by fixing wages, by declaring strikes illegal, and by a system of fines and punishments, does actively seek to prevent strikes, and not merely to discredit them. Its inherent weakness lies in the fact that when strikes do occur there is no method whereby they may be met; no method whereby the worker can be forced to return to labor under the legal conditions against which he has rebelled. This, it will be willingly conceded, "no law could ever do." But if the powers of compulsory arbitration are limited to fining the strikers, then it can do no more than could be done by a disputes act, or by a method of legal enforcement of voluntary agreements. Under a system of compulsory arbitration the general public and the employers are not interested in the fining of workers, but whether they as well as the employers can be forced to carry on industry under the awarded conditions. Critics of compulsory arbitration have always contended this to be impossible, and the experience of New Zealand shows this contention to be justified.
>
> The settlement of strikes in New Zealand has, without exception, been arrived at by ignoring the arbitration court and its awards, and by mutual agreement between the parties concerned; the details of the agreement and the extent of concessions depending on the relative strength of their bargaining power. Out of the total of 63 strikes, 49 were settled by employers granting concessions to workers. In the other 14 cases employers stood firm, and the strike collapsed or gradually "fizzled out."

The councils of conciliation established by the amended bill in 1908 seem to have met with much success and are considered preferable to the arbitration court. Out of 119 cases in 1912, 86 were settled by the councils, 19 partly so and only 14 wholly referred to the court.

CITIZENSHIP CONVENTION UNDER THE AUSPICES OF THE BUREAU OF NATURALIZATION.

In connection with the work of the Bureau of Naturalization for the better education of candidates for citizenship a convention was held in Washington, D. C., July 10 to 15, 1916, for the discussion of the various questions in regard to citizenship schools and for exhibiting the work of various schools of this character. One of the purposes of this convention was to develop a more complete course of instruction based on the experience of the several schools.

The presiding officer of the convention was Raymond F. Crist, Deputy Commissioner of Naturalization. The program was as follows:

Monday, July 10.

Address, "Welcome to the City"—Hon. Oliver P. Newman, Commissioner of the District of Columbia.

"Americanism"—Hon. Louis F. Post, Assistant Secretary of Labor.

Address of welcome—Ernest L. Thurston, superintendent of schools, Washington, D. C.

"Evening Schools for Foreigners in the Northwest"—Robert S. Coleman, chief naturalization examiner, St. Paul, Minn.

"The Public Schools in the Philippines and Hawaii" (illustrated)—Hon. Clarence B. Miller, Representative in Congress.

Tuesday, July 11.

Address—Hon. Josephus Daniels, Secretary of the Navy.

"The Schools of the United States Army"—Lieut. E. Z. Steever, United States Army.

Address—Samuel Gompers, president of the American Federation of Labor.

"Americanizing a Community" (illustrated)—J. Henri Wagner, chief clerk, Bureau of Naturalization.

"Rural Night Schools for Aliens in Northern Minnesota"—E. A. Freeman, district superintendent of schools, Grand Rapids, Minn.

"Preparation for American Citizenship and Life"—Hon. Philander P. Claxton, Commissioner, United States Bureau of Education.

Wednesday, July 12.

"Methods of Reaching and Teaching Illiterates"—Mrs. Cora Wilson Stewart, president of Kentucky Illiteracy Commission, Frankfort, Ky.

"Outdoor School Work in Tacoma, Wash." (illustrated)—Hon. Albert Johnson, Representative in Congress.

Discussion of textbooks by the convention.

"An American in the Making" (illustrated).

Thursday, July 13.

Selection—The Marine Band.

"Civic Preparedness and Americanization"—J. M. Berkey, director of special schools and extension work, Pittsburgh, Pa.

"Some of the Problems of Getting Aliens into the Night Schools"—W. M. Ragsdale, chief naturalization examiner, Pittsburgh, Pa.

Address—The President of the United States.

Selection—The Marine Band.

"The Immigrant in America" (illustrated).

"What Portland, Oreg., is doing to Americanize Foreigners"—L. R. Alderman, superintendent of schools, Portland, Oreg.

Address—Hon. William B. Wilson, Secretary of Labor.

Friday, July 14.

Address—Hon. Frederick L. Siddons, associate justice of the Supreme Court of the District of Columbia.

"The Man He Might Have Been" (illustrated).

"What Boston is Doing in Immigrant Education"—M. J. Downey, assistant director, evening and continuation schools, Boston, Mass.

"The Business Man's Point of View"—I. Walton Schmidt, industrial welfare department, board of commerce, Detroit, Mich.

"The Industrial Plan of Education in Wisconsin"—Andrew H. Melville, member, State conference board on industrial education, and chief of the bureau of civic, commercial, and community development, University of Wisconsin extension division.

"A Résumé"—Raymond F. Crist, Deputy Commissioner of Naturalization.

Saturday, July 15.

Trip to Mount Vernon.

IMMIGRATION, MAY, 1916.

The number of immigrant aliens admitted into the United States during each of the first six months of 1916 has been in excess of the number admitted during the corresponding months of 1915, thus showing a recovery, as it were, since the war began, in the influx of immigration to this country. There has also been an increase from month to month in 1916, except from May to June, when there was a slight decrease. These facts are brought out in the statement following:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1914, 1915, AND 1916.

Month.	1914	1915	1916	
			Number.	Per cent increase over preceding month.
January	44,708	15,481	17,293	8.5
February	46,873	13,873	24,740	43.1
March	92,621	19,263	27,586	11.5
April	119,885	24,532	30,560	10.8
May	107,796	26,069	31,021	15.1
June	71,728	22,598	30,764	[1].8

[1] Decrease.

Classified by races, the immigrant aliens admitted into and emigrant aliens departing from the United States during April, 1915 and 1916, were as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, MAY, 1915 AND 1916.

Races.	Admitted—		Departed—	
	May, 1915.	May, 1916.	May, 1915.	May, 1916.
African (black)	817	1,005	231	177
Armenian	35	141	5	72
Bohemian and Moravian	111	36	8	1
Bulgarian, Serbian, Montenegrin	266	218	73	9
Chinese	218	191	177	43
Croatian, Slavonian	99	48	8	1
Cuban	188	322	613	91
Dalmatian, Bosnian, Herzegovinian	8	13		
Dutch and Flemish	626	747	78	75
East Indian	7	4		1
English	2,682	3,236	693	602
Finnish	418	623	65	49
French	1,139	2,141	237	235
German	1,168	1,091	62	65
Greek	2,460	3,782	500	261
Hebrew	766	1,070	39	4
Irish	2,050	1,384	158	169
Italian (North)	1,046	427	427	315
Italian (South)	4,886	3,780	2,012	398
Japanese	792	613	68	48
Korean	3	32	4	1
Lithuanian	18	53	9	
Magyar	40	56	33	29
Mexican	806	1,531	21	32
Pacific Islander	2	2	1	2
Polish	275	492	140	19
Portugese	347	680	209	29
Roumanian	53	82	6	10
Russian	248	348	711	569
Ruthenian (Russniak)	88	122	1	
Scandinavian	2,006	2,523	259	540
Scotch	1,004	1,250	181	137
Slovak	18	23	10	8
Spanish	699	1,813	296	114
Spanish-American	213	205	34	34
Syrian	48	89	14	9
Turkish	28	59	3	2
Welsh	63	93	25	11
West Indian (except Cuban)	64	144	37	55
Other peoples	264	519	42	46
Not specified			1,257	970
Total	26,069	31,021	8,747	5,233

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

CALIFORNIA.—*Commission on Immigration and Housing. Immigrant education leaflets Nos. 1–4. San Francisco.* [*No date.*]

These leaflets are distributed with a view to aiding in the education of immigrants in American ideals. They contain information concerning the literacy of the immigrant in this country and an account of work being done in California and other cities for his education and uplift.

—— *Industrial accident commission. Engine safety orders. Effective August 1, 1916.* [*Sacramento, 1916.*] *8 pp.*

—— ——. *Laundry safety orders. Effective August 1, 1916.* [*Sacramento, 1916.*] *6 pp.*

—— ——. *Woodworking safety orders. Effective August 1, 1916.* [*Sacramento, 1916.*] *7 pp.*

These safety orders were approved by the commission under authority of chapter 176 of the Laws of 1913, after consultation with persons interested in the enforcement of the order, i. e., the employers and employees.

—— *Social insurance commission. Social insurance in California.* [*Sacramento, 1916.*] *8 pp.*

This pamphlet is a brief survey of the situation in the field of social insurance in this and foreign countries. The State of California has recently established a social insurance commission to make a study of the social insurance theory, to examine European experiments, and to make a survey of conditions in the State of California in order to be able to report to the next meeting of the legislature upon the advisability of extending the activities of the State in the field of social insurance.

—— *State board of education. A vocational guidance bibliography prepared for school and public libraries and arranged especially for youths, teachers, and specialists. Compiled for the commissioner of industrial and vocational education. January, 1916. California* [*Sacramento*], *1916. 24 pp.*

COLORADO.—*Committee on unemployment and relief. Report.* [*Denver.*] *1916. 47 pp.*

The work of this committee covers the winter of 1915, and is confined largely to providing relief work in the coal-mining region of the State (Las Animas, Huerfano, Boulder, Fremont, Gunnison, Weld, and Garfield Counties).

Unemployment conditions became acute following the withdrawal of strike benefits which were being paid during the disturbances which had prevailed for some time in the coal-mining region of the State. Extensive relief funds were obtained from the Rockefeller foundation.

ILLINOIS.—*Bureau of Labor Statistics. Seventeenth annual report of the Bureau of Labor Statistics of the Illinois Free Employment Offices and the supervision of private employment agencies for the year ending September 30, 1915.* (*Springfield, 1916.*) *70 pp.*

Legislation in 1915 effected considerable changes in the public employment office laws of Illinois. It created a general advisory board for the purposes of administrative oversight of the officers, established a central office for Chicago, and provided for the formation of local committees of supervision at the different offices throughout the State.

It cost the State of Illinois $59,000 in round numbers to maintain its employment offices (located in six different cities), or an average of 72 cents for each application for employment.

The following table shows the combined business of the Illinois Free Employment Offices for the year ending September 30, 1915:

STATISTICS OF ILLINOIS FREE EMPLOYMENT OFFICES, YEAR ENDING SEPT. 30, 1915.

Offices.	Applications for employment.			Applications for help.	
	Number filed.	Number of positions secured.	Number unfilled.	Number filed.	Number unfilled.
Chicago	47,693	14,197	33,496	18,460	4,263
Peoria	8,465	6,927	1,538	7,140	213
East St. Louis	10,022	6,697	3,325	6,850	153
Springfield	4,863	3,037	1,826	3,042	5
Rock Island-Moline	4,830	3,328	1,502	3,366	38
Rockford	5,613	3,954	1,659	4,168	214
Total	81,486	38,140	43,346	43,026	4,886

Detailed tables show by sex the number of applications for employment, the positions secured, and applications for help according to occupations classified in different industry groups.

A separate part of the report relates to licensed employment offices conducted for profit.

Massachusetts.—*Bureau of Statistics. Fifteenth annual directory of the labor organizations in Massachusetts, 1916. Boston, 1916. 59 pp. (Labor bulletin No. 113, being Part I of the annual report on statistics of labor for 1916.)*

This directory shows separately: (1) National and international organizations having one or more affiliated local unions in the United States; (2) State, district, and trades councils; (3) Central labor unions and local councils; (4) Local trade-unions. For each trade-union or organization there is given its address and name of its secretary. The scope of the directory is shown by the fact that 1,814 schedules were sent out, of which number 160 were to national organizations, 75 to State, district, and trades councils, 99 to central labor unions and councils, and 1,480 to local trade-unions. Other reliable sources were utilized in securing information.

—— *Commission on Economy and Efficiency. Report relative to the hours of labor of public employees and to Saturday half holidays. Submitted in accordance with Chapter 137, Resolves of 1915. January, 1916. Boston, 1916. 58 pp.*

The legislative session of 1915 proposed to amend the law relative to the hours of labor of public employees and as to Saturday half holidays for laborers, workmen, and mechanics employed by the State, and at the same time requested the Commission on Economy and Efficiency to ascertain the effects of such legislation. The proposed bills would restrict the labor of certain classes of State, county, and town employees to 48 hours a week, whereas the present law restricts it definitely to 8 hours a day, with a limitation of a single day's work; it would also make Saturday half holidays mandatory instead of discretionary with the head of the department.

The understanding of the law and its practical application by the heads of the different departments, the commission found, was such that—

> the effect of the proposed amendment would be slight in the State service, and practically nothing in the counties, cities, and towns. The commission can see no strong argument against the passage of the bill, at the same time believing that some advantage may be gained by adopting such a clause in order to perfect the present statute. The commission would, therefore, suggest that the proposed amendment be adopted.

—— *Industrial Accident Board. Reports of cases under the workmen's compensation act, determined by committees of arbitration, the industrial accident board, and the supreme judicial court, July 1, 1914, to December 31, 1914, inclusive. Boston, 1916. 821 pp.*

This is the third volume of reports on disputed claims under the Massachusetts workmen's compensation act decided by the different authorities concerned in the administration of the act.

NEBRASKA.—*Department of Labor. Report upon the operation of the workmen's compensation law for the year ending November 30, 1915. Lincoln,* [*1916*] *164 pp.*

This report has been considered elsewhere in this number of the Review (p. 56).

NEW YORK.—*State Library. Mothers' pension legislation in New York and other States, by William E. Hannan. Albany, 1916. 41 pp. Folded chart.* (*University of the State of New York Bulletin, No. 614, May 1, 1916; New York State Library, Legislation Bulletin 41.*)

History of mothers' pension legislation in New York and a reproduction of the laws in force, and of administrative forms in use. Digest of all State laws in force is presented in the form of a tabular statement or chart.

Twenty-nine States now have legislation of this character.

—— (NEW YORK CITY).—*Commission on Pensions. Report on the pension funds of the City of New York. Part 1: Operation of the nine existing pension funds. New York, 1916. 171 pp. Folded tables.*

The material contained in this report was gathered by a special commission with a view to unifying and reorganizing the different haphazard pension schemes in existence applicable to different grades of municipal employees.

The present report is Part 1 of the final report of the commission. Part 2, it is stated, will present the results of the commission's actuarial investigations of existing funds, while Part 3 will outline plans for reconstructing the existing pension systems of the city on a sound financial equitable basis. Part 4 will supplement the constructive recommendations with actuarial data.

Separate reports are to be published on the present condition and past operation of all individual pension plans now in operation, similar to the special report on the teacher's retirement fund already published (see Monthly Review, June, 1916, pp. 120–121).

A digest of the volume listed above will be found on p. 78 of this number of the Review.

OKLAHOMA.—*Labor laws of the State of Oklahoma. Published by Department of Labor. Oklahoma City* (*191–*), *34 pp.*

Contains text of all labor legislation and citations to court decisions interpreting particular sections of the laws.

PENNSYLVANIA.—*Department of Labor and Industry. Second annual report of the commissioner of labor and industry of the Commonwealth of Pennsylvania, 1914. Part 1: Production, wages, employees, welfare, and educational work. Harrisburg, 1915. 579 pp.*

On account of an extension of the duties of the department a considerable part of this report is devoted to welfare work in various industries, including such concerns as the New Jersey Zinc Co., Palmerton; the Westinghouse Air Brake Co., Wilmerding; the Pennsylvania Railroad Co.; Ellsworth Collieries Co., Ellsworth; Carnegie Steel Co., Pittsburgh; John Wanamaker's stores, Philadelphia; Bell Telephone Co., United Gas Improvement Co., Philadelphia; Armstrong Cork Co., Lancaster; Gimbel Bros. stores, Philadelphia; and numerous other employers.

Chapter 2 (43 pp.) is a discussion of vocational and corporation schools as conducted in Pennsylvania.

The following is a summary of manufacturing statistics presented in the report:

Number of establishments reporting	20, 571
Capital invested	$2, 340, 933, 300
Market value of production	$3, 245, 835, 800
Average days in operation	280
Total number all employees	1, 066, 486
Salaried men and office force	106, 108
Wage earners	960, 378
Wages paid salaried men and office force	$128, 111, 700
Wages paid all other employees	$557, 311, 000
Total wages paid all employees	$685, 422, 700

Average daily wage (wage earners only)	$2.07
Per cent of—	
Males employed	80.0
Females employed	20.0
Males under 16 years of age	1.1
Females under 16 years of age	1.3
Americans	72.7
Foreigners	25.9
Negroes	1.4

RHODE ISLAND.—*Chief Factory Inspector. Twenty-second annual report of factory inspection made to the General Assembly at its January session, 1916. Providence, 1916. 161 pp.*

During the year the factory inspector reported 7,045 places as having been inspected, comprising 4,365 bakeshops, stores, etc., employing less than 5 persons, and 2,680 establishments employing 5 or more persons. Among other statistics presented are the following;

NUMBER OF FACTORIES INSPECTED AND PERSONS EMPLOYED IN SUCH FACTORIES IN RHODE ISLAND, 1911 TO 1915.

Year.	Number of places visited.	Number of adults employed.	Number of children employed.	Total number employed.	Per cent of children.
1911	6,430	156,808	5,699	162,507	3.5
1912	6,520	161,585	5,761	167,346	3.4
1913	6,689	164,005	6,026	170,031	3.5
1914	6,875	152,777	5,450	158,227	3.4
1915	7,028	158,030	5,164	163,194	3.2

Two cases were brought before the district court during the year, one for violation of the 54-hour law and one for employing a child under 16 years of age after 8 o'clock p. m. Both prosecutions were sustained.

During the year 1,302 accidents were reported, 11 of them resulting in death. Of these accidents, 399 were caused by machinery.

The inspector calls attention to the need of providing adequate fire escapes on all factories and workshops.

Detailed tables show by localities and separate establishments the character of product manufactured, sanitary conditions, and number employed, classified by sex and age.

UNITED STATES.—*Congress. House. Committee on the Judiciary. Limiting activity of certain officers and employees of the Government. Hearing before the Committee on the Judiciary. House of Representatives, Sixty-fourth Congress, first session, H. R. 9820, ser. 32 (Part 1: Friday, March 17, 1916; Part 2: Saturday, March 18, 1916). Washington, 1916. 2 vols.*

These two pamphlets, comprising altogether 89 pages, constitute hearings on the Carlin Bill (H. R. 9820) proposed for the purpose of forbidding any person or employees of the Bureau of Printing and Engraving from giving their time, skill, knowledge, or experience to any foreign countries, or to any individual, firm, or corporation, to assist in establishing or carrying on any establishment or engraving business which may come into competition with American industry.

—— —— —— *Committee on Reform in the Civil Service. Court of appeals for employees in the Federal classified service. Hearing before the Committee on Reform in the Civil Service. House of Representatives, Sixty-fourth Congress, first session. April 7, 1916. Washington, 1916. 71 pp.*

The purpose of the proposed court of appeals is to pass upon the discharge of any employee from the service, giving him an opportunity for a hearing before an impartial body.

UNITED STATES.—*Congress. Senate. Committee on Immigration. Regulation and restriction of immigration. Report to accompany H. R. 10384.* [*Washington, 1916*] *20 pp.* (*Sixty-fourth Congress, first session. Senate Report No. 352*).

Contains the amendments to the House bill (H. R. 6060) restricting immigration as proposed by the Senate Committee.

—— *Department of Commerce. Bureau of Foreign and Domestic Commerce. Cotton spinning machinery industry; report on the cost of production of cotton spinning machinery in the United States.* [*Washington, 1916*] *99 pp.* (*Miscellaneous series, No. 37.*)

This report again draws attention to the fact of the variableness of the labor cost which has been a marked development in every report hitherto made on the cost of production, and which is indeed an essential feature of industry. This statement is contained in the letter of the Secretary of Commerce to the President transmitting a copy of the report listed above. It is noted that the cost of production in different plants varied from 26.47 per cent of the total cost in one plant during the most profitable year to 53.66 per cent of the total cost in another plant during the least profitable year—a variation of 27.19 per cent. If the labor cost be taken at one plant on standard units of production it is found that in one year the cost of such a unit for labor was $7.90 and in another year the labor cost for the same unit in the same plant was $11.35—a variation of 45 per cent. In the case of a second unit the variation in the same plant in the labor cost per unit is from $83.68 to $100.11—a variation of 20 per cent. The report states that though the wage rates in this industry have increased it is doubtful whether the unit cost of labor has grown, because more efficient manufacturing methods, the use of automatic machines, etc., have probably more than offset any increase in wages. The variations in labor cost mentioned are materially affected by the fluctuation in production.

The data in the report cover a period of nine years and are based upon the production of three companies operating six plants which produce over 80 per cent of our domestic output of the kind. The report shows that on the combined net sales of these three companies there was a manufacturing profit of 22.94 per cent and a final profit of 25.04 per cent during the most profitable year, a manufacturing profit of 3.80 per cent and a final profit of 5.62 per cent during the least profitable year, and a manufacturing profit of 18.29 per cent and a final profit of 20.24 per cent during the period. During the most profitable year the final profits in the six plants varied from 13.30 to 39.07 per cent of the net sales. During the least profitable year one plant had a final loss of 17.42 per cent, and the final profits of the other five varied from 0.37 to 34.68 per cent of the net sales.

During the most profitable year the materials used in all the plants amounted to 47.50 per cent of the total manufacturing cost, the pay roll 42.32 per cent, selling expense 3.36 per cent, and administrative expense 2.34 per cent. The other items of manufacturing and selling cost amounted to 4.48 per cent.

> There have been practically no labor troubles in the industry. Few highly skilled men are employed except as foremen, second hands, erectors, and machinists in the tool department. Most of the employees are machine hands, an occupation which requires very little training. The number of men employed by the three firms reporting varied from 6,500 during dull times to 8,500 during the busier years.
>
> The general working conditions were found to be good in all the establishments visited. * * *
>
> The fact that no strikes of any importance have occurred in this industry is convincing proof of the ability of the administrative officers to understand and direct labor. * * * The plants are clean, light, and in every way sanitary, adding much to the convenience and health of the workmen and the efficiency of the shop as a whole. The machinery is well protected. * * * Where dust, filings, and other dangerous substances are found, blowing systems have been installed to carry them away. In the brass foundries, where dangerous gases are formed, it is customary to change the men every two weeks, those relieved returning to the iron foundry, from which they had come. While at work in the brass foundry their pay is

increased, and, on account of the increased pay, a molder is considered fortunate to get such work, the exposure to the gases not being long enough to endanger his health.

In some places good houses are furnished for the married workmen at a rental much below the average local rate. In two cases hotels have been built for the accommodation of workmen with no families. * * * Where possible boat clubs, bowling alleys, billiard and pool rooms, athletic fields, and other means of entertainment at reduced rates are maintained.

Wages are reported as having gradually increased from year to year. Both time and piece rates are paid, and in some cases bonuses are added to the regular rates.

UNITED STATES.—*Department of Commerce. Bureau of Foreign and Domestic Commerce. The men's factory-made clothing industry; report on the cost of production of men's factory-made clothing in the United States. Washington, 1916. 300 pp. (Miscellaneous Series No. 34.)*

This volume constitutes the fifth of a series of reports by the Bureau of Foreign and Domestic Commerce regarding the cost of production in different branches of the clothing industry. This particular report covers the manufacture of men's ready-made clothing during a period of four months beginning February, 1915. Reports were secured from 64 establishments, 30 located in New York City, 7 in Rochester, N. Y., 7 in Philadelphia, Pa., 6 in Baltimore, Md., 6 in Cincinnati, Ohio, 4 in Chicago, Ill., and 4 in Cleveland, Ohio, and Milwaukee, Wis. The sales of these establishments during their last business period amounted to $66,947,954.

The report gives a somewhat detailed history of the clothing trade in the United States, followed by a summary chapter of present conditions. These are followed by detailed chapters presenting such topics as capital; net sales and turnovers; cost and profit, by establishments and by specified articles produced in the trade; manufacturing conditions; working conditions; cost-finding and accounting conditions; selling conditions; machinery and processes; and foreign trade. The volume is equipped with a glossary of technical terms and a series of cuts of machines, etc., used in the industry.

That portion of the report relating to labor conditions was drawn from Bulletin 161 of the Bureau of Labor Statistics.

The following table summarizes the cost of production in the industry:

PERCENTAGE OF AVERAGE COSTS, BY SPECIFIED ITEMS, BASED ON THE TOTAL MANUFACTURING AND SELLING EXPENSE, BY GROUPS OF ESTABLISHMENTS.

Establishment	Number of establishments.	Per cent of total manufacturing and selling expense.					
		Raw material.	Direct labor.	Indirect labor.	Factory expense.	Administrative expense.	Selling expense.
All establishments reporting data	64	52.39	29.29	3.97	2.41	3.49	8.45
Establishments having—							
No operating contracted	12	50.89	28.05	4.20	2.91	3.75	10.20
Part operating contracted	30	50.91	29.92	4.46	2.51	3.58	8.62
All operating contracted	22	56.75	28.68	2.73	1.84	3.11	6.89
Establishments with factory price of—							
Under $8	8	58.73	28.16	2.56	1.76	3.98	4.81
$8 and under $15	37	52.88	28.61	3.99	2.33	3.46	8.73
$15 and over	11	46.68	33.70	4.56	2.83	3.37	8.86
Establishments manufacturing separate trousers, etc	8	55.87	25.74	3.79	2.73	3.60	8.27
Establishments located in—							
Chicago	4	47.37	28.95	6.46	3.31	3.65	10.26
Philadelphia	7	54.15	26.83	3.34	1.94	4.63	9.11
Cleveland and Milwaukee	4	53.48	20.88	7.66	3.20	3.83	10.95
Rochester	7	51.24	32.48	3.15	2.07	2.66	8.40
Baltimore	6	51.89	29.91	2.84	2.36	3.82	9.18
New York City	30	54.50	29.84	3.13	2.17	3.25	7.11
Cincinnati	6	52.32	29.81	3.51	2.04	4.92	7.40
Establishments with net sales of—							
Under $500,000	27	53.23	28.19	3.33	2.49	4.61	8.15
$500,000 and under $1,000,000	14	52.70	30.20	3.89	2.33	3.78	7.10
$1,000,000 and under $2,000,000	14	50.94	30.47	3.77	2.44	3.34	9.04
$2,000,000 and over	9	53.08	28.46	4.36	2.38	3.15	8.57

UNITED STATES. *Department of Commerce. Bureau of Foreign and Domestic Commerce. Shirt and collar industries. Report on the cost of production of men's shirts and collars in the United States. Washington, 1916. 178 pp.* (*Miscellaneous Series, No. 36.*)

This volume contains information regarding the cost of production of men's shirt and collars, also concerning imports and exports, working conditions, factory equipment, selling methods, and practical suggestions with regard to efficient factory management.

Reports were received from four establishments manufacturing collars or collars and shirts, and 38 establishments manufacturing shirts only. Their aggregate sales during the last business year were $45,388,100, or 55 per cent of the total production in 1909.

Data on working conditions utilized in the report consisted of material collected by the Factory Investigating Commission of the State of New York for the year 1913 and 1914 from 76 shirt factories in New York City and 36 elsewhere in the State, having a working force of 13,029.

> Statistics secured regarding 13,055 workers in the shirt factories in New York State show that more than half of the male employees received less than $11 and more than half of the female employees received less than $7 during the week for which the data were secured. These employees included 340 children 14 and 15 years of age, or 3.18 per cent of the whole number. Nearly two-thirds of the female employees received less than $8 and more than one-fourth received less than $5 per week.
>
> The median weekly earnings by nativity and sex were as follows: Male, native, $11.26; foreign, $10.19. Female, native, $6.75; foreign, $6.56.
>
> The usual working time in shirt factories in New York State was 54 hours a week with a 9 or 10 hour day, 60 minutes for lunch, and Saturday afternoon off in summer.

In establishments manufacturing collars or collars and shirts the materials used in all the plants amounted to 37.47 per cent of the total manufacturing cost; labor, 34.82 per cent; factory expense, 3.83 per cent; administrative expense, 2.79 per cent, and selling expense, 21.09 per cent. In establishments manufacturing shirts raw materials cost 60.66 per cent, labor 27.85 per cent, factory expense 2.90 per cent, administrative expense 2.71 per cent, and selling expense 5.88 per cent.

War Department. Premium payments in Government employment. Letter from the Secretary of War, submitting information relative to time, studies, and premium payments in Government employment. [*Washington, 1916*]. *4 pp.* (*Sixty-fourth Congress, first session, H. Doc. No. 1053.*)

This communication was written by the Secretary of War, and gives his views upon a bill (H. R. 8665) introduced January 11, 1916, to regulate the method of directing the work of Government employees, with the object of prohibiting at Government arsenals what are known as time studies and premium payments. The Secretary considers such legislation as unwise, contending that the so-called system of scientific management, which it is proposed to eliminate from Government establishments by this bill, has been of benefit both to the Government and the employee, as shown by the amount of bonuses paid under the system and by the increased output of the arsenals during the five years of its operation.

> There has been no investigation at the Watertown Arsenal which has resulted in a report condemnatory of the practice at that establishment.
>
> All of my predecessors in the Office of the Secretary of War who have held that office since the introduction of the system at the Watertown Arsenal have been in favor of its retention and have opposed efforts to abolish it.

FOREIGN COUNTRIES.

AUSTRIA.—*Arbeitsstatistisches Amt im Handelsministerium. Bleivergiftungen in hüttenmännischen und gewerblichen Betrieben. Ursachen und Bekämpfung: IX. Teil—Protokoll über die Expertise betreffend gewerbliche Betriebe, in welchen Arbeiten zur Herstellung oder Verzierung von Tonwaren aller Art erfolgen. Vienna, 1915. xiii, 52 pp.*

The labor office of Austria, having made an investigation of the extent of lead poisoning in the manufacture of clay and related products, conducted hearings in order to secure the opinions of experts on the subject for the purpose of drafting regulations to secure safety and health in the industry. This volume constitutes the transcript of those hearings.

CEYLON.—*Inspector of Factories. Administration reports—1915: Part V—Public works: Factories. [———, 1916.] 3 pp.*

GREAT BRITAIN.—*Board of Trade. Railway accidents. Returns of accidents and casualties as reported to the Board of Trade by the several railway companies in the United Kingdom during the year ended December 31, 1915. London, 1916. 41 pp.*

During the year 1915, 412 (425)[1] employees of the railroad companies or of contractors working for the latter were killed, while 5,045 (5,065)[1] were injured, in the course of ordinary transportation proper, i. e., movement of rolling stock used exclusively upon the railways. As actual numbers employed are not reported no accident rates can be shown.

——— ——— *Unemployment insurance: Decisions given by the umpire respecting claims to benefit. Vol. 2, Nos. 501–1000. (Gotten up to April 22, 1915.) London, 1915. 429 pp.*

Unemployment benefit is payable to a workman who fulfills certain conditions set down in the law. The decision as to the amount of the benefit payable is made by a statutory officer known as an insurance officer. If the workman is dissatisfied with the decision of that officer he may appeal to a court of referees. If the two authorities are in agreement on a case, their decision is final; but, if they differ, the insurance officer may appeal to the umpire, whose decision becomes final. The volume here listed constitutes the decisions of the umpire under the National Unemployment Insurance Act. Generally only those decisions which involve a question of principle are included.

——— *National Health Insurance Commission. Reports of decisions on appeals and applications under section 67 of the National Insurance Act, 1911, and section 27 of the National Insurance Act, 1913. Part II. London, 1915. 130 pp.*

Decisions by the commission in the matter of disputed claims for compensation under the act.

——— *Registrar of Friendly Societies. Friendly societies, industrial and provident societies, building societies, trade-unions, workmen's compensation schemes, loan societies, scientific and literary societies, post office, trustee, and railway savings banks. Reports of the Chief Registrar of Friendly Societies for the year ending December 31, 1915. Part A: General report. Part D: Building societies. London, 1916. 2 vols.*

The annual report of the Registrar of Friendly Societies appears usually in four separate parts. Of these parts, the first and the last have appeared as listed above.

Friendly societies, it may be said, are very closely analogous to the fraternal organizations in this country, whose purpose is to provide sickness and burial relief or life insurance to their members. An account of their origin and development in Great Britain may be found in the twenty-fourth annual report of this bureau relating to workmen's insurance and compensation systems in Europe. (Vol. 2, pp. 1550–1611.)

The following table gives the total membership and funds for the principal divisions of societies registered under the different acts for the years 1913 and 1914:

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[1] Figures within parentheses are for 1914.

Statistics of friendly societies in Great Britain, 1913, 1914.

	Number of members.		Assets.	
	1913	1914	1913	1914
Orders	....	....	$5,396,725	$5,598,212
Districts	64,402	104,074	23,585,414	24,543,166
Branches	2,905,473	2,831,198	120,342,525	120,840,320
Total	2,969,875	2,935,272	149,324,664	150,981,698
Branchless friendly societies	4,012,847	3,888,964	113,243,007	116,165,438
Collecting societies	7,629,624	7,554,266	55,132,457	59,117,278
Cooperative societies	3,303,425	3,480,756	262,974,019	282,104,537
Building societies	617,403	628,885	243,886,356	248,706,132
Trade-unions	3,264,669	3,261,050	31,868,572	34,316,159

IRELAND.—*Local Government Board. Annual report for the year ending March 31, 1915, being the forty-third report under the Local Government Board (Ireland) Act, 1872. London, 1915. 422 pp.*

In addition to the administration of the poor relief law and the public health acts, the Local Government Board of Ireland has administrative oversight of the so-called laborers' acts, the purpose of which is to put Irish laborers into possession of agricultural holdings, assist them by means of money grants for the purchase of holdings, provide them with cottages, assist them in agricultural operations, etc.

NETHERLANDS (AMSTERDAM).—*Gemeentelijk fonds ter bevordering van de verzekering tegen de geldelijke gevolgen van werkloosheid. VIII^ste Jaarverslag over 1914. [Amsterdam, 1915.] 55 pp., folded table.*

Contains the report of the subsidized unemployment fund of the city of Amsterdam. The purpose of the fund is to pay unemployment benefits and to organize public relief work. On December 31, 1914, 54 different societies or organizations of workmen were connected with the fund and entitled to receive unemployment benefits for their members, who numbered 24,564. The number of organizations contributing to the fund and receiving benefits for their members was 11 in 1907, thus indicating a considerable growth since that period.

The finances of the fund on December 31, 1914, stood as follows:

RECEIPTS.

	Florins.	
Subsidy from the city of Amsterdam	80,000.00	($32,160.00)
Subsidy for the payment of administration expenses	1,275.39	(512.71)
Interest received	1,185.68	(476.64)
Balance from 1913	1,943.76	(781.39)
Other	7,541.20	(3,031.56)
Total	91,946.03	(36,962.30)

EXPENDITURES.

	Florins.	
Unemployment benefits to affiliated associations	60,000.00	($24,120.00)
Expenses of administration	1,290.34	(518.72)
Total	61,290.34	(24,638.72)
Assets	30,655.69	(12,323.59)

NORWAY.—*Statistike Centralbyraa. Norges bergverksdrift, 1914. Christiania, 1916. 15, 78 pp. (Norges officielle statistik, VI, 60.)*

Contains statistics of the mining and smelting industry in Norway for the year 1914. Summary tables for the country as a whole show quantity and value of production and number employed in each class of mining. Separate reports from the inspectors in each of the districts show days worked, wages paid, methods of working, hours of labor, etc.

The average number employed in the mines of Norway in 1914 was 6,556; the average number employed at smelters was 560.

—— —— *Statistisk aarbok for Kongeriget Norge, 35^{te} aargang, 1915. Christiania, 1916. 18, 196 pp.*

A statistical yearbook of the Kingdom for the year 1915. Summarizes, among other matter, labor and industrial statistics, with a special chapter on social insurance.

—— (CHRISTIANIA).—*Statistiske Kontor. Nogen oplysninger om de senere aars prisbevægelse paa livsfornødenheter i Kristiania. Christiania, 1915. 14 pp. (Specialunderskelser, III.)*

—— ——, *Fortsætelse av specialundersøkelse nr. III angaaende prisbevægelsen paa livsfornødenheter i Kristiania samt statistiske opgaver angaaende de kommunale funktionærers forsrøgelsesbyrde. Christiania, 1916. 24 pp. (Specialundersøkelser, V.)*

These two special investigations by the statistical office of Christiania relate to the increase in the cost of living which has occurred in that city in recent years, particularly since the outbreak of the war. The second pamphlet also contains some data on the wages of municipal employees and the size and composition of their families.

The results of the inquiry are presented in the form of a weighted index number of retail prices. The basic prices are those collected the last Saturday of each month from several merchants in the city. There are included 57 articles of food, fuel, and lighting, and 12 quotations for clothing and shoes. The items of rent and taxes are also given consideration. The final index number is weighted according to the average consumption or expenditures of a family of five persons as ascertained by an independent investigation in 1912–13 by the municipal statistical office.

The table which follows shows the actual and relative amounts of a yearly household budget in items of the average prices in Christiania, 1901 to February, 1916, classified by five principal groups of expenditures.

ACTUAL AND RELATIVE COST PER YEAR OF A HOUSEHOLD BUDGET FOR A FAMILY OF 5 PERSONS IN CHRISTIANIA IN TERMS OF AVERAGE RETAIL PRICES, 1901 TO FEBRUARY, 1916, CLASSIFIED BY GROUPS OF EXPENDITURES.

AMOUNT.

Year.	Foods.	Fuel and lighting.	Clothing.	Rent.	Taxes.	Miscellaneous.	Total.
1901	$161.62	$21.17	$35.05	$69.68	$11.62	$56.60	$355.74
1902	160.67	18.56	35.61	65.66	12.69	55.48	348.67
1903	159.10	18.36	36.29	61.64	12.45	54.47	342.31
1904	157.40	17.92	36.84	57.62	13.35	53.58	336.71
1905	163.95	17.47	37.80	54.67	13.54	54.39	341.82
1906	167.52	17.84	38.48	56.28	14.31	55.71	350.14
1907	174.77	19.17	39.15	57.62	11.42	57.17	359.30
1908	176.11	21.19	39.83	59.50	11.07	58.22	365.92
1909	173.08	19.65	40.78	61.64	10.49	57.84	363.48
1910	175.31	18.52	41.86	64.85	10.18	58.80	369.52
1911	179.57	19.67	42.54	68.61	10.04	60.63	381.06
1912	190.09	23.67	43.21	72.63	9.65	64.20	403.45
1913	192.29	24.13	46.76	78.52	7.85	66.14	415.69
1914	198.26	23.99	49.07	83.89	6.60	68.46	430.27
1915	239.91	31.54	52.38	86.56	6.77	78.94	496.10
January-February, 1914	188.84	23.16	49.07	83.89	6.60	66.52	419.08
January-February, 1915	223.66	27.50	52.38	86.56	6.78	75.10	471.98
January-February, 1916	264.92	38.34	64.28	89.24	6.94	87.72	551.45

ACTUAL AND RELATIVE COST PER YEAR OF A HOUSEHOLD BUDGET FOR A FAMILY OF 5 PERSONS IN CHRISTIANA IN TERMS OF AVERAGE RETAIL PRICES, 1901 TO FEBRUARY, 1916, CLASSIFIED BY GROUPS OF EXPENDITURES—Concluded.

RELATIVE.

Year.	Foods.	Fuel and lighting.	Clothing.	Rent.	Taxes.	Miscellaneous.	Total.
1901	91.8	99.9	88.0	117.1	105.0	97.2	97.2
1902	91.2	87.6	89.4	110.4	114.7	95.3	95.3
1903	90.3	86.6	91.1	108.6	112.5	93.5	93.5
1904	89.4	84.5	92.5	96.8	120.7	92.0	92.0
1905	93.1	82.4	94.9	91.9	122.4	93.4	93.4
1906	95.1	84.2	96.6	94.6	129.3	95.7	95.7
1907	99.2	90.4	98.3	96.8	103.2	98.2	98.2
1908	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1909	98.3	92.7	102.4	103.6	94.8	99.3	99.3
1910	99.5	87.4	105.1	109.0	92.0	101.0	101.0
1911	102.0	92.8	106.8	115.3	90.7	104.1	104.1
1912	107.9	111.7	108.5	122.1	87.2	110.3	110.3
1913	109.2	113.9	117.4	132.0	70.9	113.6	113.6
1914	112.6	113.2	123.2	141.0	59.7	117.6	117.6
1915	136.2	148.8	131.5	145.4	61.2	135.6	135.6
January-February, 1914	107.2	109.3	123.2	141.0	59.7	114.3	114.3
January-February, 1915	127.0	129.8	131.5	145.5	61.2	129.0	129.0
January-February, 1916	150.4	180.9	161.4	150.0	61.2	150.7	150.7

SCOTLAND.—*Local Government Board. Twentieth Annual Report, 1914. Edinburgh, 1915. 417 pp.*

Among other matters, the Local Government Board has administrative oversight of operations under the Unemployed Workmen Act of 1905, old age pension laws and housing and town planning. Other laws administered by it are the poor law and the public health laws.

SOUTH AFRICA.—*Director of census. Statistical Yearbook of the Union of South Africa. No. 3, 1914–15. Pretoria, 1916. xix, 359 pp.*

This large folio volume contains data usually found in similar publications. Section 5 headed "Labor (Including Cost of Living)" presents statistics on trade-unions, labor disputes, employment offices, natives employed, cost of food, working-class rents, and weekly wages.

—— *Miners' Phthisis Board. Second annual report of the miners' phthisis board for the year ended 31st July, 1914. Cape Town, 1915. 19 pp.*

An ordinary workmen's compensation law covering only disability arising from the occurrence of miners' phthisis was enacted by the union, June 22, 1912. This, the second annual report, shows 2,678 first applications for compensation during the year ended July 31, 1914, and 292 second applications. Awards of compensation were made to 2,214 persons, of which number 171 were dependents; the claims of 556 were refused as not within the act, making 2,770 claims passed on during the year.

The total expenditure incurred in connection with the administration of the fund during the year was £15,228 ($74,107). The amount paid for compensation and contingent liability on awards amounted to £1,047,869 ($5.099,454). The amount actually paid out on the basis of awards allowed was £442,212 ($2,152,025).

SWEDEN.—*Kommerskollegium. Industri berättelse för år 1914. Stockholm, 1916. 162 pp.*

This volume constitutes a manufacturing census for the year 1914, showing data for 9,695 industrial plants employing 397,707 persons, of which number 364,845 were wage earners and 32,862 were salaried employees. The census includes only those establishments employing at least 10 persons, or having an annual production of the value of at least 10,000 crowns ($2,680).

The following table shows the distribution, among industry groups, of all wage earners, classified by sex and as minors:

PERSONS EMPLOYED IN SWEDISH INDUSTRIES, 1914.

Industry group.	Males.		Females.		Minors.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Mining and metal industries	108,569	96.66	3,746	3.34	12,012	10.69
Earth, clay, and stone	41,274	95.33	2,020	4.67	4,709	10.88
Woodworking	55,125	98.56	807	1.44	8,389	15.00
Paper and printing	31,415	84.11	5,934	15.89	5,178	13.86
Food products	25,084	67.06	12,324	32.94	2,771	7.41
Clothing and textiles	14,404	32.17	30,365	67.83	8,029	17.93
Leather, hair, and rubber	9,186	65.96	4,741	34.04	2,944	21.14
Chemicals	9,985	67.43	4,823	32.57	2,462	16.63
Power, light, and fuel plants	5,017	99.48	26	.52	53	1.05
Total	300,059	82.24	64,786	17.76	46,547	12.76

SWITZERLAND, BASEL-STADT (Canton).—*Arbeitslosenkasse. 6. Jahres-bereicht pro 1915. Basel, 1916. 26 pp.*

The evil economic effects of the war are said to have continued with increasing severity during the year. There was, however, a diminution by 200 in the number of members receiving unemployment benefits from the fund (*Kasse*) during the year, as compared with 1914.

TASMANIA.—*Department of Public Health. Annual report for 1913–14,* [*1914–15*], *on health, factories, wages, boards, shops, etc. Hobart, 1913–1915. 3 vols.*

In the language of the report, "the year under review [1914–15], owing to the abnormal conditions existing consequent upon war and drought, does not permit of a favorable comparison with past years or show the progressive state of manufactures and industries that otherwise might have reasonably been expected" (p. 13).

	1913–14.	1914–15.
Number of factories	903	909
Number employed	8,109	7,787
Males	6,462	6,161
Females	1,647	1,626

Referring to the Wages Board Act, 1910, the report declares that "this branch of the work of the Department of Public Health is constantly being increased and extended, not only by the addition of new boards, but by the boards already in existence, amending their determinations from time to time." On June 30, 1915, 31 boards were in existence, and it was estimated that 30,000 persons are affected by their rulings.

—— *Government Statistician. Statistics of the State of Tasmania for the year 1914–15.* [*Hobart,*] *1915. 477, 15, 7 pp.*

Among other general statistics contains manufacturing data; wage rates; statistics of friendly societies and trade-unions; summary of labor legislation; etc.

OFFICIAL PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

DENMARK.—*Statistiske Efterretninger udgivet af det Statistiske Departement. Copenhagen.*

May 26, 1916 (vol. 8, No. 8).—Retail prices, May, 1916; Increase in prices of coal and coke; Statistics of production; Unemployment, February, 1916; Index numbers of the Economist.

FINLAND.—*Arbetsstatistisk Tidskrift utgifven af Industristyrelsen i Finland. Helsingfors.*

No. 3, 1916.—Investigation of conditions surrounding the employment of women and children in bobbin factories in Viborg and Lahtis; Reports of public employment offices in Finland, 1915; Workmen's Saving Society of the Kymmene Aktiebolag; Employment conditions in sawmills; Miscellaneous reports from foreign countries; Cost of living, first quarter, 1916.

GREAT BRITAIN.—The Board of Trade Labor Gazette. London.

June, 1916.—Employment chart; The labor market. Special articles on—Employment in Germany; Retail food prices in United Kingdom, Berlin, Vienna, and Italy; Obligations of employers to mobilized employees in Italy; Acreage under crops and number of live stock in England and Wales; Agricultural cooperation; Tenants' copartnership societies. Reports on employment in the principal industries; Labor in the British dominions oversea and in foreign countries; Board of Trade labor exchanges. Statistical tables: Trade disputes; Changes in rates of wages; Sliding scale changes in wages; Distress committees in May; Prices of wheat, flour and bread; Cooperative wholesale societies; Diseases of occupations; Fatal industrial accidents; Pauperism; Unemployment insurance; Foreign trade. Legal cases, official notices, etc.

INTERNATIONAL LABOR OFFICE (BASEL, SWITZERLAND).—*Bulletin des Internationalen Arbeitsamtes, Jena.*

(The German edition of this bulletin, which appears also in English and French, is the earliest published, and its contents are therefore here listed. Only titles of laws or decrees reproduced in the bulletin are given, omitting those merely entered as titles.)

Nos. 3 to 5, 1916.—National labor legislation—AUSTRIA: Decree, December 17, 1913, of the Ministry of the Interior relating to the sale of colors and putty containing lead; Imperial decree, January 10, 1915, relating to the application of the Mercantile Employees' Act to mercantile and other higher employees of architects; Imperial decree, March 19, 1916, amending chapter 26 of Part II (relating to the labor contract) of the Civil Code. BRITISH COLONIES, SOUTH AUSTRALIA: Act, December 19, 1912, to make better provision for dealing with industrial matters and disputes, and for purposes consequent on such provision, including certain amendments of the factories acts, 1907 to 1910. FRANCE: Law, December 27, 1912, amending paragraph 3 of article 9 of the law April 5, 1910, relating to workmen's and farmers' pensions; Decree, December 28, 1912, amending the decree September 9, 1905, relating to subsidies to funds for the relief of unemployment; Decree, February 12, 1913, relating to the application of Book II of the Labor Code to Martinique; Decree, June 17, 1913, as to application of the law July 13, 1911, relating to the treatment of miners affected with ankylostomiasis; Law, July 14, 1913, providing for subsidies to large families; Articles 68 to 75 of the financial law, July 30, 1913, relating to maternity benefits; Article 48 of the law, July 31, 1913, relating to local railroads (working conditions and old-age pensions of employees); Decree, August 11, 1913, containing an order of the public administration as to the enforcement of the provisions of Book II of the

Labor Code (Title II: Hygiene and safety of the workers) with respect to sleeping rooms assigned to workers in all establishments subject to the law; Decrees, September 4 and 7, 1913, determining conditions for the application to Guadeloupe of Books I and II of the Labor Code; Decree, September 22, 1913, providing for the application of the provisions of Book II of the Labor Code (Title II: Hygiene and safety of the workers) with respect to the special measure relating to booths outside of shops and stores; Decree, December 17, 1913, containing regulations of the public administration for the application of the law, June 17, 1913, relating to the period of rest for women in confinement; Law, February 25, 1914, amending the law, June 29, 1894, creating an independent old-age insurance fund for mine workers; Decree, March 29, 1914, providing for measures against the dangers of alcoholism as far as the hygiene and safety of workmen are concerned; Law, April 2, 1914, providing for the protection of bonds furnished by employees and workmen; Law, April 4, 1914, relating to the weekly rest period in the central markets of Paris; Law, July 13, 1914, amending the law July 29, 1893, relating to the participation of French workmen's associations in the letting of municipal contracts; Law, July 15, 1914, supplementing the law, June 17, 1913, on aid to women in confinement, by means of a provision authorizing the prefectural councils to decide disputes as to the legal residence of the party to be aided, arising in the application of this law; Law, July 15, 1914, relating to extension of the provisions of the accident insurance law of April 9, 1898, to lumbering and forestry; Law, July 30, 1914, amending articles 2 and 11 of the law July 14, 1908, relating to the seamen's invalidity insurance fund; Decree, January 19, 1915, making effective in Algeria the provisions of Book I of the Labor Code; Decree, January 31, 1915, making applicable to Algeria the law, July 12, 1909, constituting a homestead nondistrainable; Decree, June 20, 1915, amending the list of dangerous, unhealthy, and obnoxious industrial establishments; Law, July 17, 1915, amending the law of April 5, 1910, and February 27, 1912, relating to workmen's and farmers' old-age pensions; Decree, December 28, 1915, creating in the ministry of labor and social welfare a consultative committee for international agreements on matters of social welfare. GERMANY (EMPIRE): Notification March 27, 1916, as to amendment of the provisions of June 18, 1914, relating to trade boards for home workers. (PRUSSIA): Joint decree, August 20, 1913, of the ministers of commerce and industry, interior, and agriculture relating to the treaty with Italy as to accident insurance. (BAVARIA): Law, August 15, 1914, amending the mining law. (UPPER BAVARIA): Notification March 30, 1914, relating to the employment of journeymen and apprentices in hotels, saloons, restaurants, and boarding houses for transients in Munich. (GERMAN EAST AFRICA): Decree, July 6, 1912, for the prevention of accidents; Decree, February 5, 1913, relating to the hiring of native labor; Decree, February 5, 1913, regulating the rights of native workers. SWITZERLAND (CANTON GLARUS): Law, May 7, 1916, relating to State old-age and invalidity insurance for the Canton of Glarus. (URUGUAY): Decree, January 31, 1916, making regulations for the application of the 8-hour law; Decree, February 21, 1916, supplementing the decree January 31, 1916, by regulation of the rest periods of bank employees; Resolution, February 22, 1916, as to the application of the provisions for rest periods to bakery workers; Decree, February 25, 1916, providing an 8-hour day for the shoe industry; Decree, March 22, 1916, regulating the computation of the 6 weekly workday periods mentioned in article 3 of the 8-hour law. (WAR MEASURES): German Empire, Prussia, Bavaria, Saxony, Wurttemberg, Baden, Hesse, Hamburg, Bremen, Lübeck, Austria, Hungary, Belgium, France, Italy.

ITALY.—*Bollettino dell' Ufficio del Lavoro. Ministero di Agricoltura, Industria e Commercio, Rome. (Semimonthly.)*

June 1, 1916.—Labor market, by localities and industries; Labor disputes, April and first half of May, 1916; Retail prices of foodstuffs in foreign countries; Reports of employers' organization and of trade-unions; Legislation affecting labor; Court decisions; Activities of the labor office.

NETHERLANDS.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague.*

May, 1916.—Labor market, April, 1916; Unemployment and unemployment insurance, April, 1916, with special reference to the building trade; Reports of employment offices, April, 1916; Strikes and lockouts, 1916; Employment conditions on public works, collective agreements, wages, etc.; Trade-union movement; Wholesale and retail prices, May, 1916; Emigration; Legal decisions affecting labor; Reports of economic and social import; Reports on employment conditions in foreign countries; Statistical tables on the labor market, prices of bread, infractions of the labor code, industrial diseases, building and housing inspection and State finances; Laws, decrees, etc., affecting labor.

NEW YORK.—*The Bulletin Issued Monthly by the New York State Industrial Commission. Albany.*

June, 1916 (vol. 1, No. 9).—Accident prevention; Accidents analyzed; Recent exemptions from the State industrial code; Appellate court decisions; Attitude of the commission in workmen's compensation cases; Labor market; Factory inspections; Reports of bureaus.

NEW ZEALAND.—*Journal of the Department of Labor. Wellington.*

May, 1916.—Conditions of employment and trade, April, 1916; Reports from women's employment offices; Recent legal decisions affecting labor in New Zealand and Great Britain; Statistics of persons placed in employment, April, 1916; Trade-unions registered; Cooperative enterprises; Industrial accidents; and Retail prices.

SPAIN.—*Boletin del Instituto de Reformas Sociales (Publicación Mensual). Madrid.*

May, 1916 (vol. 13, No. 143).—Reports from the office of the secretary and technical divisions; Strikes; Cost of living; Congresses and conventions; Legislation affecting labor.

SWEDEN.—*Sociala Meddelanden utgivna av K. Socialstyrelsen, Stockholm.*

No. 5, 1916.—The labor market, April, 1916; Amount of employment, first quarter, 1916; Unemployment among members of trade-unions; State and municipal war measures; Development of public employment offices; Rent conditions and settlement of house-rent disputes; Prohibition of the employment of women in loading and stevedoring; Proposed prohibition against the enticing of workers to foreign countries; Conditions of employment in the peat industry; Ruling on the application of the factory law; Factory inspection, January to March, 1916; Reports of the factory inspectors upon fatal industrial accidents; Miscellaneous notes concerning labor legislation and employment conditions in foreign countries, etc.; Operations of public employment bureaus in Sweden, April, 1916; Retail prices and cost of living, 1905 to April, 1916; Prices of live stock, 1905 to April, 1916; Live stock supply and estimated consumption at public slaughterhouses, April, 1916; Fish prices in Stockholm and Gottenborg, 1915-16.

MISCELLANEOUS.

AUSTRIA.—*Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfall- und Krankenversicherung der Arbeiter. Vienna.*

May, 1916.—Joint decrees of the ministry of the interior and the ministry of commerce, May 1, 1916, concerning the relief of unemployed members of sick funds; Order enforcing above-named decree; Change in the organization of the district sick fund of Vorarlberg; Dispensary for the treatment of venereal diseases for the district sick fund of Vienna; Decisions of the administrative court relating to sickness insurance; Decisions of the administrative court relating to workmens' accident insurance; Decisions of courts of arbitration; Decisions of the administrative court relating to old-age insurance for salaried workers.

GERMANY.—*Amtliche Nachrichten des Reichsversicherungsamts. Berlin.* (*Monthly.*)

May 15, 1916.—Accident insurance: Decisions of the decision senate. Sickness invalidity and survivors' insurance: Circular letter, April 1, 1916, concerning the status of the funds of the institutes devoted to public welfare purposes (housing, etc.); Decisions on appeal; Decisions of the decision senate; Other decisions. Disbursements of the invalidity insurance institute, March, 1916, for pensions and benefits to insured persons and their survivors; Receipts April, 1916, from the sale of contribution stamps.

RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

*American Federation of Labor, Wisconsin branch. Labor conditions in Wisconsin. 4th report by the Executive Board. * * * July 1, 1916, 16 pp. text, 10 tables.*

Contains statistics for 1914 and 1915 of membership of trade-unions in the State, wages and earnings, hours of labor, unemployment, and trade agreements. Reports were made by 327 unions, or 75 per cent of total in the State, having 23,835 members.

Angell, Norman (Ralph Lane). War and the workers. London [n. d.], 63 pp.

Associazione degli industriali d'Italia per prevenire gli infortuni del lavoro. Rendiconti dell' esercizio al 31 dic. 1915. 19 pp.

Administrative report of the Italian employers' association for the prevention of accidents, year ending December 31, 1915.

Bourne, Randolph S. The Gary schools. Boston, Houghton, c1916. 204 pp.

Describes the so-called Gary system of reorganizing public schools to meet changing social and industrial conditions.

Bowley, Arthur L. An elementary manual of statistics. London, King, 1915. 220 pp.

Cooperative Union, Limited. Forty-seventh Cooperative Congress, Leicester, 1915. [Proceedings.] 753 pp.

There were 1,410 delegates, representing 1,521 industrial cooperative distributive and productive societies of the United Kingdom, with a membership of 2,919,348 in 1913.

Fyfe, Thomas A. Employers and workmen under the munitions of war acts. London, Hodge, 1916. 95 pp.

A handbook explaining duties and responsibilities of employers and employees under the acts, having for its special object the avoidance of industrial disputes.

Groat, George G. Introduction to the study of organized labor. New York, Macmillan, 1916. 494 pp.

The purpose of this work is to give a comprehensive view of the organized labor movement. Introductory chapters on the beginnings of the movement in England and America, wage theories and modern industrialism, are given, following which concrete forms of organization are described to show how union purposes are sought to be realized. The more important activities illustrating the spirit and purposes of unionism are presented under two heads: (1) Industrial, including collective bargaining in all its forms and also benefit and insurance features, and (2) political, covering legislative methods, labor laws, political labor party, and legislation versus collective bargaining. Transitional movements now going on are also discussed.

Higgins, H. B. Federal industrial arbitration. A new province for law and order. Melbourne, 1915. 24 pp.

Originally printed in the Harvard Law Review and reproduced in the MONTHLY REVIEW for February, 1916.

Hobson, J. A. Labor and the cost of war. London, 1916. 16 pp.

Discusses the effect of war on industry and wages in Great Britain, condition of workers after the war, and the burden of war loans.

International Association on Unemployment. French section. L'orientation professionelle et la placement des jeunes gens en Grande-Bretagne, Paris, 1916. 35 pp. (Circulaires du secrétariat général, No. 34, March, 1916.)

—— —— *La guerre et la chômage aux États-Unis. Paris, 1916. 20 pp. (Circulaires du secrétariat général, No. 35, June, 1916.)*

The first of the above pamphlets is an account of the juvenile labor exchanges in Great Britain, and their work in vocational guidance. The second is a summary of the report on unemployment of the American section of the International Association published in the American Labor Legislation Review of November, 1915, and summarized in the MONTHLY REVIEW of this bureau for March, 1916 (Vol. II, No. 3), pp. 25, 26.

International congress on Sunday rest, 14th, Oakland, Cal., 1915. Sunday, the world's rest day, an illustrated story of the 14th International Lord's Day Congress. New York, Doubleday, 1916. 622 pp.

Has chapters on industries and industrial problems connected with Sunday work.

International Cooperative Aalliance. 18th report, January, 1913, to December, 1915. 15 pp.

Lega nazionale delle cooperative. L' opera della lega durante il periodo della guerra. Monza [1916] 36 pp.

Report of Italian Cooperative League for period covered by the war.

McGuire, Charles P. Bookbinding industry in Louisville. [n. d.] 9 pp.

Merritt, Walter Gordon, Associate counsel, American Anti-Boycott Association. Organized labor and democracy. [1916, 15] pp.

—— *Some phases of the Federal industrial commission report. [1915] 15 pp.*

Moore, Harold E. Farm work for discharged soldiers. London, King, 1916. 31 pp.

A series of proposals suggesting farm sanatoria for partially disabled men, cooperative hand-labor farms for able-bodied discharged men, and settlements of small holdings to rent to men with small capital.

National Amalgamated Union of Labor. 26th annual report for 1915. 107 pp.

This organization had 277 branches and 70,430 members in 1915. In 1915 only £243 12s. 1d. ($1,185.54) was paid in strike benefits as compared with £4,014 10s. 8d. ($4,937.23) in 1914, and £498 13s. 6½d. ($2,426.81) in lockout benefits as compared with £5,073 6s. 6d. ($24,689.34) in 1914.

National Association of Corporation Schools. Codification committee. Report c1916. 75 pp.

A digest and index of school work conducted by members of the association in various industries, making it possible to look up general practice in an industry, trade division, school, or course.

National Association of Women Workers. Occasional paper, No. 71. 68 pp.

In addition to other material, contains branch reports on war work and the report of a conference on war employment for women.

National Fire Protection Association. Proceedings of 20th annual meeting. Chicago, 1916.

Contains, in addition to other material, an address on fire protection and juvenile workers, and reports of committees on manufacturing risks and special hazards, safety, and protection of openings in walls and partitions.

*National Union of Railwaymen. Report * * * for 1915. London, 1916. 275 pp.*

This union in 1915 had 1,240 branches, 307,035 members, and an income of £251,014 4s. 6d. ($1,221,560.73). Unemployment benefits were £5,243 6s. 1d. ($25,516.54) and protection benefits £2,124 9s. 10d. ($10,338.84) in 1915, as compared with £13,452 13s. 11d. ($65,467.54) and £2,983 13s. 1d. ($14,519.95), respectively, in 1914.

Oklahoma University bulletin. Workmen's compensation. June, 1915. 132 pp.

A collection of articles and suggestions relating to various phases of workmen's compensation, for the use of students.

Rankin, Mary T. Arbitration and conciliation in Australasia. London, Allen, 1916. 192 pp.

A digest of this work appears elsewhere in this number of the Monthly Review.

Sanders, William S. Trade-unionism in Germany. London, Fabian society, 1916. 52 pp.

Toogood, George E. Labor unrest, wartime thoughts on a national danger. London, Brown, 1915. 78 pp.

Trades-union Congress. (England) 47th annual report, 1915.

One item of interest this report appears elsewhere in this number of the Monthly Review, p. 82.

Travelers Insurance Co., Hartford, Conn. Safety in building construction. Hartford, 1916. 109 pp.

Umbreit, Paul. 25. jahre deutscher gewerkschaftsbewegung 1890–1915. Berlin, 1915. 185 pp.

Review of 25 years' history of the Federation of Social Democratic Trade-Unions in Germany.

Van Deventer, John H. Handbook of machine shop management. New York, McGraw-Hill, 1915. 374 pp.

A comprehensive technical work on the study and solution of problems in management.

Walter, Henriette R. Investigations of industries in New York City, 1905–1915. New York, Russell Sage Foundation, 1916. 24 pp.

Ward, Harry F. Living wage a religious necessity. Philadelphia, American Baptist Publishing Society, 1916. 24 pp.

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the annual and special reports and of the bimonthly bulletin has been discontinued, and since July, 1912, a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual bulletins falling under each, is given below. A list of the reports and bulletins of the bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

No. 1. Wholesale prices, 1890 to 1912. (Bul. No. 114.)
No. 2. Wholesale prices, 1890 to 1913. (Bul. No. 149.)
No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. No. 173.)
No. 4. Wholesale prices, 1890 to 1914. (Bul. No. 181.)
No. 5. Wholesale prices, 1890 to 1915. (Bul. No. 200.) [In press.]

Retail Prices and Cost of Living.

No. 1. Retail prices, 1890 to 1911: Part I. (Bul. No. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. No. 105: Part II.)
No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. No. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. No. 106: Part II.)
No. 3. Retail prices, 1890 to August, 1912. (Bul. No. 108.)
No. 4. Retail prices, 1890 to October, 1912. (Bul. No. 110.)
No. 5. Retail prices, 1890 to December, 1912. (Bul. No. 113.)
No. 6. Retail prices, 1890 to February, 1913. (Bul. No. 115.)
No. 7. Sugar prices, from refiner to consumer. (Bul. No. 121.)
No. 8. Retail prices, 1890 to April, 1913. (Bul. No. 125.)
No. 9. Wheat and flour prices, from farmer to consumer. (Bul. No. 130.)
No. 10. Retail prices, 1890 to June, 1913. (Bul. No. 132.)
No. 11. Retail prices, 1890 to August, 1913. (Bul. No. 136.)
No. 12. Retail prices, 1890 to October, 1913. (Bul. No. 138.)
No. 13. Retail prices, 1890 to December, 1913. (Bul. No. 140.)
No. 14. Retail prices, 1907 to December, 1914. (Bul. No. 156.)
No. 15. Butter prices, from producer to consumer. (Bul. No. 164.)
No. 16. Retail prices, 1907 to June, 1915. (Bul. No. 184.)
No. 17. Retail prices, 1907 to December, 1915. (Bul. No. 197.)

Wages and Hours of Labor.

No. 1. Wages and hours of labor in cotton, woolen, and silk industries, 1890 to 1912. (Bul. No. 128.)
No. 2. Wages and hours of labor in lumber, millwork, and furniture industries, 1890 to 1912. (Bul 129.)
No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. No. 131.)
No. 4. Wages and hours of labor in boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. No. 134.)
No. 5. Wages and hours of labor in cigar and clothing industries, 1911 and 1912. (Bul. No. 135.)
No. 6. Wages and hours of labor in building and repairing of steam railroad cars, 1890 to 1912. (Bul. No. 137.)
No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. No. 143.)
No. 8. Wages and regularity of employment in dress and waist industry, New York City. (Bul. No. 146.)
No. 9. Wages and regularity of employment in cloak, suit, and skirt industry. (Bul. No. 147.)
No. 10. Wages and hours of labor in cotton, woolen, and silk industries, 1907 to 1913. (Bul. No. 150.)
No. 11. Wages and hours of labor in iron and steel industry in U. S., 1907 to 1912. (Bul. No. 151.)
No. 12. Wages and hours in lumber, millwork, and furniture industries, 1907 to 1913. (Bul. No. 153.)
No. 13. Wages and hours of labor in boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. No. 154.)
No. 14. Wages and hours of labor in clothing and cigar industries, 1911 to 1913. (Bul. No. 161.)
No. 15. Wages and hours of labor in building and repairing of steam railroad cars, 1907 to 1913. (Bul. No. 163.)
No. 16. Wages and hours of labor in iron and steel industry in U. S., 1907 to 1913. (Bul. No. 168.)
No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. No. 171.)

Wages and Hours of Labor—Continued.

No. 18. Wages and hours of labor in hosiery and underwear industry, 1907 to 1914. (Bul. No. 177.)
No. 19. Wages and hours of labor in boot and shoe industry, 1907 to 1914. (Bul. No. 178.)
No. 20. Wages and hours of labor in men's clothing industry, 1911 to 1914. (Bul. No. 187.)
No. 21. Wages and hours of labor in cotton, woolen, and silk industries, 1907 to 1914. (Bul. No. 190.)
No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. No. 194.)
No. 23. Street railway employment in the United States. (Bul. No. 204.) [In press.]

Employment and Unemployment.

No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. No. 192.)
No. 2. Unemployment in the United States. (Bul. No. 195.)
No. 3. Proceedings of Employment Managers' Conference. (Bul. No. 196.)
No. 4. The British System of Labor Exchanges. (Bul. No. 206.) [In press.]
No. 5. Proceedings of the Employment Managers' Conference of Boston. (Bul. No. 202.) [In press.]

For material relating to these subjects, but not included in this series, see Miscellaneous series, Nos. 1, 10, 12 (Buls. Nos. 109, 172, 183).

Women in Industry.

No. 1. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. (Bul. No. 116.)
No. 2. Working hours of women in the pea canneries of Wisconsin. (Bul. No. 119.)
No. 3. Employment of women in power laundries in Milwaukee. (Bul. No. 122.)
No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bul. No. 160.)
No. 5. Summary of report on condition of woman and child wage earners in U. S. (Bul. No. 175.)
No. 6. Effect of minimum-wage determinations in Oregon. (Bul. No. 176.)
No. 7. The boot and shoe industry in Massachusetts as a vocation for women. (Bul. No. 180.)
No. 8. Unemployment among women in department and other retail stores of Boston, Mass. (Bul. No. 182.)
No. 9. Dressmaking as a trade for women in Massachusetts. (Bul. No. 193.) [In press.]

For material relating to this subject, but not included in this series, see Miscellaneous series, Nos. 2, 3, 8 (Buls. Nos. 117, 118, 167).

Workmen's Insurance and Compensation (including laws relating thereto).

No. 1. Care of tuberculosis wage earners in Germany. (Bul. No. 101.)
No. 2. British National Insurance Act, 1911. (Bul. No. 102.)
No. 3. Sickness and accident insurance law of Switzerland. (Bul. No. 103.)
No. 4. Law relating to insurance of salaried employees in Germany. (Bul. No. 107.)
No. 5. Workmen's compensation laws of the United States and foreign countries. (Bul. No. 126.)
No. 6. Compensation for accidents to employees of the United States. (Bul. No. 155.)
No. 7. Compensation legislation of 1914 and 1915. (Bul. No. 185.)
No. 8. Compensation laws of the United States and foreign countries. (Bul. No. 203.) [In press.]

Industrial Accidents and Hygiene.

No. 1. Lead poisoning in potteries, tile works, and sanitary ware factories. (Bul. No. 104.)
No. 2. Hygiene of the painters' trade. (Bul. No. 120.)
No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bul. No. 127.)
No. 4. Lead poisoning in the smelting and refining of lead. (Bul. No. 141.)
No. 5. Industrial accident statistics. (Bul. No. 157.)
No. 6. Lead poisoning in the manufacture of storage batteries. (Bul. No. 165.)
No. 7. Industrial poisons used in the rubber industry. (Bul. No. 179.)
No. 8. Report of British departmental committee on danger in the use of lead in the painting of buildings. (Bul. No. 188.)
No. 9. Report of the committee on statistics and insurance cost of the International Association of Industrial Accident Boards and Commissions. (Bul. No. 201.) [In press. Limited edition.]
No. 10. Anthrax as an occupational disease. (Bul. No. 205.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).

No. 1. Conciliation and arbitration in the building trades of Greater New York. (Bul. No. 124.)
No. 2. Report of industrial council of British Board of Trade on its inquiry into industrial agreements. (Bul. No. 133.)
No. 3. Michigan copper district strike. (Bul. No. 139.)
No. 4. Industrial court of the cloak, suit, and skirt industry of New York City. (Bul. No. 144.)
No. 5. Conciliation, arbitration, etc., in dress and waist industry, New York City. (Bul. No. 145.)
No. 6. Collective bargaining in the anthracite coal industry. (Bul. No. 191.)
No. 7. Collective agreements in the men's clothing industry. (Bul. No. 198.) [In press.]

Labor Laws of the United States (including decisions of courts relating to labor).

No. 1. Labor legislation of 1912. (Bul. No. 111.)
No. 2. Decisions of courts and opinions affecting labor, 1912. (Bul. No. 112.)
No. 3. Labor laws of the United States, with decisions of courts relating thereto. (Bul. No. 148.)
No. 4. Decisions of courts and opinions affecting labor, 1913. (Bul. No. 152.)
No. 5. Labor legislation of 1914. (Bul. No. 166.)
No. 6. Decisions of courts affecting labor, 1914. (Bul. No. 169.)
No. 7. Labor legislation of 1915. (Bul. No. 186.)
No. 8. Decisions of courts affecting labor, 1915. (Bul. No. 189.)

Foreign Labor Laws.

No. 1. Administration of labor laws and factory inspection in European countries. (Bul. No. 142.)

Vocational Education.

No. 1. Vocational education survey of Minneapolis. (Bul. No. 199.) [In press.]

For material relating to this subject, but not included in this series, see Wages and hours of labor series, No. 9 (Bul. No. 147); Conciliation and arbitration series, No. 5 (Bul. No. 145); Miscellaneous series, Nos. 6, 7 (Buls. Nos. 159, 162).

Miscellaneous Series.

No. 1. Statistics of unemployment and the work of employment offices in United States. (Bul. No. 109.)
No. 2. Prohibition of nightwork of young persons. (Bul. No. 117.)
No. 3. Ten-hour maximum working-day for women and young persons. (Bul. No. 118.)
No. 4. Employers' welfare work. (Bul. No. 123.)
No. 5. Government aid to home owning and housing of working people in foreign countries. (Bul. No. 158.)
No. 6. Short-unit courses for wage earners, and a factory school experiment. (Bul. No. 159.)
No. 7. Vocational education survey of Richmond, Va. (Bul. No. 162.)
No. 8. Minimum-wage legislation in the United States and foreign countries. (Bul. No. 167.)
No. 9. Foreign food prices as affected by the war. (Bul. No. 170.)
No. 10. Unemployment in New York City, N. Y. (Bul. No. 172.)
No. 11. Subject index of publications of U. S. Bureau of Labor Statistics to May 1, 1915. (Bul. No 174.)
No. 12. Regularity of employment in the women's ready-to-wear garment industry. (Bul. No. 183.)

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BUREAU OF LABOR STATISTICS
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MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

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CONCILIATION WORK OF THE DEPARTMENT OF LABOR, JULY 16 TO AUGUST 15, 1916.

The organic act of the department gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation. During the month, July 16 to August 15, 1916, the Secretary exercised his good offices in 23 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, JULY 16 TO AUGUST 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy between Missouri Pacific Ry. Co. and its signalmen.	12	....	Adjusted.
Strike of machinists, Youngstown, Ohio	800	3,700	Pending.
Strike of shipbuilding plants, Norfolk, Va	....	....	Settlement in 5 shops.
Strike of shipbuilding plants, New York City and vicinity	10,000	15,000	Pending.
Controversy between Mare Island, Cal., and Bremerton, Wash., Navy Yards and their mechanical forces.	....	....	Do.
Strike of iron miners, Mesaba region, Minn	15,000	....	Do.
Strike of street railway employees, Harrisburg, Pa	....	....	Do.
Controversy between Washington Steel & Ordnance Co. and electrical workers, Geisboro, D. C.	33	2,700	Controversy ended by action of union in calling off strike.
Lockout of insurance agents, Prudential Life Insurance Co., New York, N. Y., and Philadelphia, Pa.	....		Pending.
Strike of carmen, Erie R. R., Port Jervis, N. Y	100	250	Do.
Garment workers' strike, New York City	50,000	....	Adjusted.
Strike of Central of New Jersey Ry. clerks, Jersey City, N. J.	150	....	Unable to adjust.
Cement workers' strike, La Salle, Ill	1,000	....	Pending.
Machinists' strike, Hamilton, Ohio	....	....	Do.
Controversy between Baltimore & Ohio R. R. Co. and maintenance-of-way employees.	....	....	Do.
Controversy between Crown Cork & Seal Co. and machinists, Baltimore, Md.	....	....	Do.
Controversy between Akron, Ohio, rubber manufacturers and employees, Akron, Ohio.	....	....	Do.
Threatened strike of milk delivery drivers, Cleveland, Ohio	....	....	Do.
Strike of milk delivery drivers, St. Louis, Mo	....	....	Do.
Strike, Lehigh Spinning Co., Philadelphia, Pa	....	....	Adjusted.
Strike at mills of A. J. Cameron & Co., Philadelphia, Pa	....	....	Pending.
Strike of trackmen, Chicago, Burlington & Quincy Ry. Co.	200	....	Do.
Controversy between the Coal & Coke Ry. Co. and shop employees.	....	....	Do.

The following strikes in Philadelphia, reported in the statement of July 15, 1916, as pending, have been adjusted since that date: Jonathan Ring & Son, Mark D. Ring & Co., H. B. Thomas, Byrne & Hance, Chas. W. Haven, Klink & Landis, H. B. Rinehard, John W. Emsley, Bunker-Howard Spinning Co. (All fine woolen yarn spinners, located in Philadelphia.)

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During July, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 16,309 persons in employment as compared with 11,960 during June, 1916. The operations of the different offices throughout the country, by months, since May, 1915, when fuller reports began to be made, are contained in the statement following:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, DURING THE MONTHS OF MAY, 1915, TO JULY, 1916.

Year and month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.
1915.					
May	638	3,826	12,132	3,752	3,495
June	1,249	3,601	14,530	5,131	4,646
July	1,160	8,665	18,061	6,360	6,035
August	1,279	7,931	17,827	7,321	6,757
September	1,201	4,551	13,334	5,671	5,405
October	1,104	5,423	12,215	5,460	5,006
November	847	4,650	11,908	4,459	4,146
December	698	3,588	11,902	2,622	2,170
1916.					
January	933	5,063	15,015	4,300	3,419
February	1,423	6,413	14,257	5,036	4,185
March	3,443	10,209	19,484	8,113	7,030
April	3,805	12,104	13,498	8,843	7,653
May	4,918	21,326	17,614	12,938	11,453
June	4,826	17,402	18,824	13,839	11,960
July	5,488	23,657	24,058	17,608	16,309

The following statement of the work of the 18 different zones covering the whole country gives details for July, 1916:

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR JULY, 1916.

Zone number and office.	Opportunities received.		Applications for employment.		
	Applications for help.	Persons applied for.	Applications received.	Referred to employment.	Number actually employed.
1. Boston, Mass	7	141	54	14	14
2. New York, N. Y	245	956	1,128	510	494
Buffalo, N. Y	93	850	698	694	517
Total	338	1,806	1,826	1,204	1,011

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR JULY, 1916—Concluded.

Zone number and office.	Opportunities received.		Applications for employment.		
	Applications for help.	Persons applied for.	Applications received.	Referred to employment.	Number actually employed.
3. Philadelphia, Pa	86	588	302	288	224
Wilmington, Del	21	524	101	27	13
Pittsburgh, Pa	15	196	505	273	246
Total	122	1,308	908	588	483
4. Baltimore, Md	42	110	156	192	180
5. Norfolk, Va	17	182	114	42	22
6. Jacksonville, Fla	....	....	732	515	515
Miami, Fla	1	2	14	2	2
Savannah, Ga	2	106	362	106	106
Charleston, S. C	1	38	97	169	169
Mobile, Ala	....	....	10	....	....
Total	4	146	1,215	792	792
7. New Orleans, La	18	21	289	35	13
Gulfport, Miss	1	1	47	....	....
Total	19	22	336	35	13
8. Galveston, Tex	5	6	34	11	9
Houston, Tex	....	....	9	....	....
El Paso, Tex	....	....	1	....	....
Albuquerque, N. Mex	....	....	3	....	....
Total	5	6	47	11	9
9. Cleveland, Ohio	21	201	125	88	12
10. Chicago, Ill	220	1,702	1,096	1,050	1,022
Detroit, Mich	153	1,269	1,072	1,063	1,044
Indianapolis, Ind	62	857	866	737	660
Sault Ste. Marie, Mich	8	81	77	64	63
Total	443	3,909	3,111	2,914	2,789
11. Minneapolis, Minn	118	128	70	60	60
12. St. Louis, Mo	14	117	200	50	45
Kansas City, Mo	505	1,458	1,228	1,006	787
Total	519	1,575	1,428	1,056	832
13. Denver, Colo	3	3	27	8	....
14. Helena, Mont	3	3	27	8	....
15. Seattle, Wash	150	829	1,317	456	416
Aberdeen, Wash	20	92	226	92	92
Bellingham, Wash	31	162	167	92	75
Everett, Wash	....	....	....	....	....
North Yakima, Wash	538	925	883	728	696
Spokane, Wash	74	580	639	511	511
Tacoma, Wash	530	2,529	1,165	1,088	1,065
Walla Walla, Wash	209	390	490	382	375
Sumner, Wash	350	2,500	1,894	1,775	1,768
Puyallup, Wash	150	1,250	650	639	628
Total	2,052	9,257	7,431	5,763	5,626
16. Portland, Oreg	1,224	2,589	2,512	2,454	2,399
17. San Francisco, Cal	193	412	1,248	654	378
18. Los Angeles, Cal	....	....	103	....	....
San Diego, Cal	335	778	1,017	803	767
Total	335	778	1,120	803	767
Harvest hands (July), through general inspector, Kansas City, Mo	23	1,081	2,303	922	922
Grand total	5,488	23,657	24,058	17,608	16,309

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS.

In the following table data are presented for July, 1915, and July, 1916, relative to the operations of public employment offices. Information is furnished for State employment bureaus in 16 States, municipal employment bureaus in 9 States, State-city employment bureaus in 2 States, a Federal-State employment bureau in 1 State, and a city-private employment bureau in 1 State.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JULY, 1915 AND 1916.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New registrations.	Renewals.		
California (municipal):						
Berkeley—						
July, 1915	177	228	131	491	228	228
July, 1916	217	235	59	312	223	223
Sacramento—						
July, 1915	150	340	100	(1)	340	(1)
July, 1916	191	379	63	(1)	379	(1)
California (State-city):						
Los Angeles[2]—						
July, 1915	(1)	(1)	1,813	(1)	(1)	2,857
July, 1916	2,547	4,401	2,159	(1)	4,478	4,070
California (State):						
Oakland—						
July, 1916	729	994	541	322	958	737
Sacramento—						
July, 1916	340	959	801	259	831	777
San Francisco—						
July, 1916	1,295	2,439	2,306	345	2,416	1,725
Total:						
July, 1915					568	3,085
July, 1916					9,285	7,532
Colorado (State):						
Colorado Springs—						
July, 1915	(1)	906	(1)	(1)	(1)	810
July, 1916	(1)	1,242	1,025	(1)	858	(1)
Denver, No. 1—						
July, 1915	(1)	228	(1)	(1)	(1)	213
July, 1916	(1)	374	355	(1)	339	(1)
Denver, No. 2—						
July, 1915	(1)	205	(1)	(1)	(1)	164
July, 1916	(1)	270	346	(1)	249	(1)
Pueblo—						
July, 1915	(1)	232	(1)	(1)	(1)	232
July, 1916	(1)	502	533	(1)	497	(1)
Total:						
July, 1915					(1)	1,419
July, 1916					1,943	(1)
Connecticut (State):						
Bridgeport—						
July, 1915	308	(1)	(1)	(1)	(1)	271
July, 1916	978	(1)	(1)	(1)	(1)	875
Hartford—						
July, 1915	342	(1)	(1)	(1)	(1)	265
July, 1916	776	(1)	(1)	(1)	(1)	553
New Haven—						
July, 1915	315	(1)	(1)	(1)	(1)	225
July, 1916	741	(1)	(1)	(1)	(1)	601
Norwich—						
July, 1915	28	(1)	(1)	(1)	(1)	19
July, 1916	230	(1)	(1)	(1)	(1)	224
Waterbury—						
July, 1915	156	(1)	(1)	(1)	(1)	127
July, 1916	156	(1)	(1)	(1)	(1)	109
Total:						
July, 1915					(1)	907
July, 1916					(1)	2,362

[1] Not reported.

[2] Includes Los Angeles district, 8 counties.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JULY, 1915 AND 1916—Continued.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New registrations.	Renewals.		
Illinois (municipal):						
Chicago—						
July, 1916	[1] 47	704	[2] 706	(3)	704	135
Illinois (State):						
Chicago—						
July, 1916	(3)	8,275	[2] 9,586	(3)	(3)	7,781
East St. Louis—						
July, 1915	(3)	577	[2] 770	(3)	(3)	577
July, 1916	(3)	1,518	[2] 1,576	(3)	(3)	1,095
Peoria—						
July, 1915	(3)	419	[2] 519	(3)	(3)	419
July, 1916	(3)	1,246	[2] 823	(3)	(3)	759
Springfield—						
July, 1915	(3)	212	[2] 374	(3)	(3)	212
July, 1916	(3)	795	[2] 721	(3)	(3)	654
Rock Island-Moline—						
July, 1915	(3)	374	[2] 479	(3)	(3)	374
July, 1916	(3)	767	[2] 702	(3)	(3)	608
Rockford—						
July, 1915	(3)	302	[2] 399	(3)	(3)	301
July, 1916	(3)	1,080	[2] 895	(3)	(3)	763
Total:						
July, 1915	....	....	....	....	(3)	1,883
July, 1916	....	....	....	....	704	11,795
Indiana (State):						
Fort Wayne—						
July, 1915	225	349	253	109	362	348
July, 1916	381	799	460	115	575	485
South Bend—						
July, 1915	142	294	412	117	271	243
July, 1916	279	878	389	39	392	316
Total:						
July, 1915	....	....	....	....	633	591
July, 1916	....	....	....	....	967	801
Iowa (State):						
Des Moines—						
July, 1916	34	105	54	12	40	11
Kansas (State):						
July, 1915	41	49	50	6	50	45
July, 1916	60	72	90	....	79	61
Kentucky (city-private):						
Louisville—						
July, 1915	(3)	109	459	993	63	38
July, 1916	(3)	285	360	617	282	145
Kentucky (State):						
Louisville—						
July, 1915	57	57	....	....	57	57
July, 1916	364	364	....	....	364	364
Total:						
July, 1915	....	....	....	....	120	95
July, 1916	....	....	....	....	646	509
Massachusetts (State):						
Boston—						
July, 1915	1,218	1,361	[4] 880	(3)	[5] 2,333	1,084
July, 1916	2,065	2,309	[4] 1,185	(3)	[5] 3,052	1,396
Fall River—						
July, 1915	75	83	[4] 16	(3)	[5] 81	66
July, 1916	113	115	[4] 13	(3)	[5] 106	101
Springfield—						
July, 1915	430	529	[4] 227	(3)	[5] 683	441
July, 1916	990	1,282	[4] 665	(3)	[5] 1,598	981
Worcester—						
July, 1915	457	608	[4] 531	(3)	[5] 843	390
July, 1916	975	1,246	[4] 507	(3)	[5] 1,210	639
Total:						
July, 1915	....	....	....	....	[5] 3,940	1,981
July, 1916	....	....	....	....	[5] 5,966	3,117

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[1] Number of requisitions.

[2] Number applying for work.

[3] Not reported.

[4] Number who were registered.

[5] Number of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JULY, 1915 AND 1916—Continued.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New registrations.	Renewals.		
Michigan (State):						
Battle Creek—						
July, 1916	110	293	[1]146	(2)	126	126
Bay City—						
July, 1916	62	250	[1]116	(2)	116	109
Detroit—						
July, 1915	(2)	(2)	(2)	(2)	(2)	1,496
July, 1916	1,179	5,196	[1]5,151	(2)	5,151	5,151
Flint—						
July, 1915	(2)	(2)	(2)	(2)	(2)	351
July, 1916	437	1,028	[1]918	(2)	918	918
Grand Rapids—						
July, 1915	(2)	(2)	(2)	(2)	(2)	589
July, 1916	512	929	[1]1,006	(2)	994	994
Jackson—						
July, 1915	(2)	(2)	(2)	(2)	(2)	415
July, 1916	341	837	[1]806	(2)	806	793
Kalamazoo—						
July, 1915	(2)	(2)	(2)	(2)	(2)	381
July, 1916	464	480	[1]464	(2)	464	464
Lansing—						
July, 1916	88	247	[1]216	(2)	204	197
Muskegon—						
July, 1916	40	337	[1]220	(2)	220	204
Saginaw—						
July, 1915	(2)	(2)	(2)	(2)	(2)	695
July, 1916	156	1,018	[1]861	(2)	861	861
Total:						
July, 1915	....	....	....	....	(2)	3,927
July, 1916	....	....	....	....	9,860	9,817
Minnesota (State):						
Duluth—						
July, 1915	(2)	(2)	(2)	(2)	(2)	800
July, 1916	(2)	(2)	(2)	(2)	(2)	1,203
Minneapolis—						
July, 1915	(2)	(2)	(2)	(2)	(2)	1,509
July, 1916	(2)	(2)	(2)	(2)	(2)	2,099
St. Paul—						
July, 1915	(2)	(2)	(2)	(2)	(2)	833
July, 1916	(2)	(2)	(2)	(2)	(2)	1,351
Total:						
July, 1915	....	....	....	....	(2)	3,142
July, 1916	....	....	....	....	(2)	4,653
Missouri (State):						
Kansas City—						
July, 1915	(2)	400	[1]443	(2)	(2)	399
July, 1916	511	1,550	[1]1,428	(2)	1,047	826
St. Joseph—						
July, 1915	(2)	1,828	[1]925	(2)	(2)	908
July, 1916	(2)	1,288	[1]1,020	(2)	(2)	1,019
St. Louis—						
July, 1915	(2)	192	[1]441	(2)	(2)	182
July, 1916	(2)	522	423	58	(2)	375
Total:						
July, 1915	....	....	....	....	(2)	1,489
July, 1916	....	....	....	....	1,047	2,220
Montana (municipal):						
Butte—						
July, 1915	242	323	500	(2)	495	272
July, 1916	300	350	450	(2)	460	350
New Jersey (municipal):						
Newark—						
July, 1915	(2)	610	(2)	(2)	751	462
July, 1916	(2)	1,563	848	2,414	1,536	1,178
New York (municipal):						
New York City—						
July, 1915	273	331	2,457	....	741	255
July, 1916	1,944	2,157	2,188	....	3,048	1,800

[1] Number applying for work.

[2] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JULY, 1915 AND 1916—Continued.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New registrations.	Renewals.		
New York (State):						
Albany—						
July, 1915	(1)	363	780	(1)	479	299
July, 1916	545	770	452	176	651	384
Brooklyn—						
July, 1915	(1)	566	1,610	(1)	903	418
July, 1916	1,287	1,863	1,166	475	1,984	1,085
Buffalo—						
July, 1915	(1)	529	1,304	(1)	608	398
July, 1916	836	1,564	917	61	1,402	1,052
Rochester—						
July, 1915	....	745	889	....	964	440
July, 1916	1,079	1,860	717	114	1,335	663
Syracuse—						
July, 1915	(1)	805	1,108	(1)	944	540
July, 1916	554	703	399	56	616	501
Total:						
July, 1915	....	....	....	....	4,639	2,350
July, 1916	....	....	....	....	9,036	5,485
Ohio (State-city):						
Akron—						
July, 1915	(1)	753	1,167	1,777	759	541
July, 1916	(1)	1,951	627	1,314	1,573	1,314
Cincinnati—						
July, 1915	(1)	938	1,583	4,043	1,146	779
July, 1916	(1)	1,564	1,221	2,509	1,387	932
Cleveland—						
July, 1915	(1)	3,752	3,128	6,505	3,659	2,897
July, 1916	(1)	7,297	2,809	6,661	6,335	5,202
Columbus—						
July, 1915	(1)	1,144	801	2,616	1,127	1,011
July, 1916	(1)	2,826	892	1,892	2,227	1,827
Dayton—						
July, 1915	(1)	577	718	1,710	541	507
July, 1916	(1)	1,069	677	1,032	914	817
Toledo—						
July, 1915	(1)	2,205	2,214	3,802	1,878	1,793
July, 1916	(1)	5,118	1,386	1,747	2,438	2,068
Youngstown—						
July, 1915	(1)	777	684	772	680	606
July, 1916	(1)	1,240	685	1,034	1,183	1,051
Total:						
July, 1915	....	....	....	....	9,790	8,134
July, 1916	....	....	....	....	16,057	13,211
Oklahoma (State):						
Enid—						
July, 1915	(1)	....	(1)	(1)	(1)	168
July, 1916	(1)	289	(1)	(1)	(1)	272
Muskogee—						
July, 1915	(1)	....	(1)	(1)	(1)	149
July, 1916	(1)	263	(1)	(1)	(1)	178
Oklahoma City—						
July, 1915	(1)	....	(1)	(1)	(1)	325
July, 1916	(1)	588	(1)	(1)	(1)	436
Tulsa—						
July, 1915	(1)	....	(1)	(1)	(1)	102
July, 1916	(1)	870	(1)	(1)	(1)	767
Total:						
July, 1915	....	....	....	....	(1)	744
July, 1916	....	....	....	....	(1)	1.653
Oregon (municipal):						
Portland—						
July, 1916	(1)	2,589	266	(1)	(1)	2,401

[1] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, JULY, 1915 AND 1916—Concluded.

State and city.	Number of applications from employers.	Number of persons asked for by employers.	Number of persons applying for work.		Number of persons referred to positions.	Number of positions filled.
			New registrations.	Renewals.		
Pennsylvania (State):						
Altoona—						
July, 1916	(1)	238	47	....	37	32
Harrisburg—						
July, 1916	(1)	465	159	72	191	181
Johnstown—						
July, 1916	(1)	226	41	15	49	45
Philadelphia—						
July, 1916	(1)	591	787	199	551	507
Pittsburgh—						
July, 1916	(1)	2,233	749	168	562	512
Total:						
July, 1916	....	....	....	....	1,390	1,277
Rhode Island (State):						
Providence—						
July, 1915	267	317	232	98	(1)	317
July, 1916	321	311	194	118	(1)	311
Texas (municipal):						
Dallas—						
July, 1915	132	167	147	15	167	167
July, 1916	177	393	46	7	393	393
Fort Worth—						
July, 1915	80	259	[2] 506	(1)	275	199
July, 1916	121	373	330	47	315	307
Total:						
July, 1915	....	....	....	....	442	366
July, 1916	....	....	....	....	708	700
South Dakota (Federal-State):						
Huron—						
July, 1916	60	3,691	1,270	(1)	1,270	1,270
Virginia (municipal):						
Richmond—						
July, 1915	146	254	[2] 550	(1)	269	158
July, 1916	288	691	711	(1)	795	396
Washington (Federal-municipal):						
Tacoma [3]	....	....	....	....	....	....
Washington (municipal):						
Everett—						
July, 1915	(1)	(1)	(1)	(1)	(1)	212
July, 1916	(1)	(1)	(1)	(1)	(1)	438
Seattle—						
July, 1915	2,950	3,198	(1)	(1)	3,403	2,936
July, 1916	3,347	6,471	(1)	(1)	6,497	6,009
Spokane—						
July, 1915	(1)	(1)	(1)	(1)	933	863
July, 1916	2,229	4,610	....	....	4,075	3,929
Total:						
July, 1915	....	....	....	....	4,336	4,011
July, 1916	....	....	....	....	10,572	10,376

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[1] Not reported.

[2] Number applying for work.

[3] Figures for this office are carried regularly in the Review under the subject, "Federal employment work of the Department of Labor," to which the reader is referred.

EMPLOYMENT IN SELECTED INDUSTRIES IN JULY, 1916.

In continuation of similar information given in this publication for several months past, four tables are here presented, which are designed to show the changes in the amount of employment in representative establishments in 10 manufacturing industries between July, 1915, and July, 1916, and between June, 1916, and July, 1916.

The following table shows that the number of employees in July, 1916, was greater than the number of employees in July, 1915, in all of the 10 industries covered except cotton manufacturing and cigar manufacturing. The greatest increase shown is 27.1 per cent for the iron and steel industry. The amount of money paid out to employees in July, 1916, was greater in all of the 10 industries than in July, 1915. The greatest increase in the amount of money so paid out was 49.5 per cent in the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JULY, 1915, AND JULY, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for July both years.	Period of pay roll.	Number on pay roll in July—		Per cent of increase (+) or decrease (−).	Amount of payroll in July—		Per cent of increase (+) or decrease (−).
				1915	1916		1915	1916	
Boots and shoes	86	63	1 week	39,097	48,261	+23.4	$450,317	$621,556	+38.0
Cotton manufacturing.	92	51	...do	40,781	40,391	− 1.0	320,850	363,618	+13.3
Cotton finishing	19	14	...do	8,542	8,905	+ 4.2	82,107	103,372	+25.9
Hosiery and underwear.	82	51	...do	26,228	28,325	+ 8.0	223,287	255,308	+14.3
Woolen	56	43	...do	32,473	35,759	+10.1	304,877	423,855	+39.0
Silk	64	47	2 weeks	14,123	16,053	+13.7	271,204	317,056	+16.9
Men's ready-made clothing.	85	35	1 week	16,074	17,455	+ 8.6	198,432	226,140	+14.0
Iron and steel	142	98	½ month	125,613	159,676	+27.1	3,597,452	5,378,285	+49.5
Car building and repairing.	80	18	...do	22,383	26,195	+17.0	639,730	772,038	+20.7
Cigar manufacturing.	107	56	1 week	17,270	16,430	− 4.9	175,308	175,762	+ .2

From the smaller number of establishments reporting the number of employees actually working on the last full day of the reported pay period it will be noted in the table following that more employees were on the pay roll in all the industries, except that of cigar manufacturing, in July, 1916, than in July, 1915. The greatest increase reported is 25.7 per cent for the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN JULY, 1915, AND JULY, 1916.

Industry.	Establishments reporting for July both years.	Period of pay roll.	Number actually working on last full day of reported pay period in July—		Per cent of increase (+) or decrease (−).
			1915	1916	
Boots and shoes	24	1 week	11,920	13,329	+11.8
Cotton manufacturing	35	.....do	23,945	23,967	(1)
Cotton finishing	9	.....do	5,776	6,579	+13.9
Hosiery and underwear	13	.....do	9,690	9,921	+ 2.4
Woolen	41	.....do	29,415	33,157	+12.7
Silk	38	2 weeks	11,623	13,189	+13.5
Men's ready-made clothing	10	1 week	1,218	1,282	+ 5.3
Iron and steel	82	½ month	99,269	124,797	+25.7
Car building and repairing	18	.....do	20,690	23,160	+11.9
Cigar manufacturing	31	1 week	6,131	5,844	− 4.7

[1] Increase of less than one-tenth of 1 per cent.

An examination of the next table shows that half of the 10 industries listed show an increase in the number of employees on the pay roll in July, 1916, over June, 1916, and half show a reduction. In the amount of money paid out to employees in wages a reduction is shown for all the industries for July, 1916, as against June, 1916. The greatest reduction is 13 per cent for the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JUNE, 1916, AND JULY, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for June and July.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
				June, 1916.	July, 1916.		June, 1916.	July, 1916.	
Boots and shoes	86	64	1 week	48,578	49,096	+1.1	$637,092	$630,525	− 1.0
Cotton manufacturing.	92	52	do	41,988	42,056	+ .2	386,816	377,223	− 2.5
Cotton finishing	19	14	do	8,924	8,905	− .2	106,426	103,372	− 2.9
Hosiery and underwear.	82	50	do	27,373	27,140	− .9	263,804	246,560	− 6.5
Woolen	56	44	do	36,594	36,141	−1.2	439,091	428,942	− 2.3
Silk	64	44	2 weeks	15,196	15,253	+ .4	331,138	299,444	− 9.6
Men's ready-made clothing.	85	33	1 week	16,657	16,245	−2.5	226,828	222,713	− 1.8
Iron and steel	142	100	½ month	157,693	159,338	+1.0	6,124,440	5,329,374	−13.0
Car building and repairing.	80	16	do	19,499	19,439	− .3	680,136	603,624	−11.2
Cigar manufacturing.	107	55	1 week	16,199	16,285	+ .5	173,018	172,821	− .1

In the table next below the industries of boots and shoes, men's ready-made clothing, and cigar manufacturing report a larger number of employees as actually working on the last full day of the reported pay period in July, 1916, than in June, 1916. A decline in the number of such employees within the month is shown for all of the other industries. The greatest reduction is 4.4 per cent for the car building and repairing industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN JUNE, 1916, AND JULY, 1916.

Industry.	Establishments reporting for June and July.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			June, 1916	July, 1916	
Boots and shoes	20	1 week	11,508	11,691	+1.6
Cotton manufacturing	34	do	23,776	23,765	− [1]
Cotton finishing	9	do	6,677	6,579	−1.5
Hosiery and underwear	12	do	8,721	8,374	−4.0
Woolen	42	do	28,387	27,947	−1.6
Silk	37	2 weeks	13,227	12,830	−3.0
Men's ready-made clothing	8	1 week	790	799	+1.1
Iron and steel	96	½ month	131,230	130,378	− .7
Car building and repairing	16	do	17,873	17,078	−4.4
Cigar manufacturing	28	1 week	5,513	5,618	+1.9

[1] Less than one-tenth of 1 per cent.

RECENT CHANGES IN WAGE RATES.

Inquiry was made on the volume of employment schedule sent to reporting establishments as to changes in wage rates for the period June 15, 1916, to July 15, 1916. Of the many establishments that failed to report, it is probably safe to assume that in most cases the omission of a definite reply indicated no change. No establishment reported a decrease in wage rates. Based upon the information received for the ten industries listed in the preceding tables, it appears that the increases made in this period were few in number, and were largely confined to a portion of the force, as, for instance, those engaged in some one department or on some particular kind of work in an establishment. The greatest number of increases in wages is reported for the iron and steel industry, where certain groups of employees or those in a selected occupation are reported as receiving increases of from 5 to 15 per cent; seven establishments report increases ranging between these figures. In the textile industries of cotton manufacturing, cotton finishing, hosiery and underwear, woolen, and silk, wage rates are reported as practically stationary, a total of only five increases being reported from the establishments rendering reports in these industries. In boot and shoe manufacturing, increases are reported by two establishments. Increases of 10 per cent are reported by three establishments in the men's ready-made clothing industry. In the industries of cigar manufacturing, and car building and repairing, increases are reported by one establishment in each of these industries.

ANNUAL CONVENTION OF THE ASSOCIATION OF GOVERNMENTAL LABOR OFFICIALS.

The third annual convention of the Association of Governmental Labor Officials of the United States and Canada met in Buffalo, N.Y., Monday, July 17, 1916, continuing in session until Thursday, July 20. The convention was called to order by Commissioner Louis Wiard, of the New York Industrial Commission. The address of welcome was made by Mr. John Sales, secretary to the mayor of Buffalo, and the response by James V. Cunningham, commissioner of labor of Michigan, president of the association.

The subjects of factory inspection, woman and child labor, safety regulations and safeguards, vocational education, and uniform legislation, occupied most of the time of the convention, papers or addresses being given on these subjects, followed by extended discussions. In the report of the secretary, John T. Fitzpatrick, commissioner of labor of Missouri, attention was called to the importance of pending bills in Congress providing that bulletins issued by departments of labor be carried as fourth-class mail matter, and for the establishment of a bureau of safety and of a bureau of employment in the United States Department of Labor; also, to the McGillicuddy bill providing more adequate compensation for government employees injured by accident in the course of employment.

An address on woman and child labor was made by Oscar S. Nelson, chief of the Department of Factory Inspection of Illinois, in which he advocated keeping children in school until 16 years of age and giving them vocational as well as academic training. Speaking of his own State, he took the position that the mothers' pension act should be amended so that payments may continue until the child is 16 years of age, and also that fathers, steadily employed but receiving low wages, should receive aid from the State, in order to keep their children in school until the age of 16. He claimed that under the Illinois 10-hour law, in some places, hotels particularly, women were subject to call 18 hours out of 24, and he urged a law restricting their hours of labor to 8, to be performed within 10 consecutive hours. This address led to an extended discussion on child labor and vocational training.

A brief address on occupational diseases was made by John H. Vogt, a chemical engineer connected with the Bureau of Hygiene of New York, and at present engaged in an investigation of sanitary conditions in the chemical industry of that State.

Commissioner Wiard spoke of the work of the New York Industrial Commission, mentioning the fact that New York has 65,000 factories, 1,400 of which make regular monthly reports on the condition of employment. An accident case is settled every 40 seconds in that State. The commission holds itself in readiness to give advice to both employers and employees regarding industrial conditions. It issues pamphlets showing proper methods of guarding machines.

Mr. Louis Guyon, commissioner of labor of Quebec, spoke briefly on conditions in that province. A paper read by Mr. Edwin Mulready, commissioner of labor of Massachusetts, led to an extended discussion of foundry rules and safety measures. The subject of uniform legislation was brought up by one of the delegates, and varying opinions of the possibility of getting such legislation were expressed.

A prolonged discussion on the subject of a uniform 8-hour day for women in all the States led to the adoption of the following resolution by the convention, all the States and Provinces represented voting in the affirmative, except New York:

Whereas 37 States have enacted legislation restricting the hours of labor for women; and

Whereas such regulations vary from an 8-hour working day to a 72-hour week; and

Whereas this Association believes in uniformity in this form of legislation: Therefore be it

Resolved, That this Association of Governmental Labor Officials hereby expresses itself as favoring an 8-hour workday for all woman employees, and that such 8-hour workday shall be performed within 10 consecutive hours.

Other resolutions were adopted by the convention favoring the establishment of a labor department in Arizona; inviting the International Association of Industrial Accident Boards and Commissions, the American Association of Public Employment Offices, and other organizations of a similar nature, to unite with the Association of Governmental Labor Officials in deliberations on all subjects of mutual interest under one organization; and indorsing the plan to establish a national accident and fire prevention day.

Ashville, N. C., was selected as the convention city for 1917, the date of the convention to be determined later by the executive committee.

The following were elected as officers for the year 1916–17:

President, Oscar F. Nelson, chief, Illinois Department of Factory Inspection, Chicago, Ill.

First vice president, John J. Walsh, deputy inspector of buildings, Indianapolis, Ind.

Second vice president, Miss Linna E. Bresette, secretary of the Kansas Industrial Welfare Commission, Topeka, Kans.

Third vice president, Miss Ella M. Haas, State deputy of the Ohio Industrial Commission, Dayton, Ohio.

Fourth vice president, Perry J. Ward, special agent of the Michigan Factory Inspection Department, Detroit, Mich.

Fifth vice president, Edwin Mulready, commissioner of labor, Boston, Mass.

Secretary, John T. Fitzpatrick, commissioner of labor statistics, Jefferson City, Mo.

ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF PUBLIC EMPLOYMENT OFFICES.

The American Association of Public Employment Offices held its fourth annual meeting in the city of Buffalo, N. Y., in the auditorium of the Hotel Statler, on Thursday and Friday, July 20 and 21. Delegates were in attendance from all the leading States having employment office systems as well as from several of the Canadian Provinces.

The meeting was called to order on Thursday morning by Charles B. Barnes, president of the association. Mr. G. P. Berner acted as secretary pro tem, as the secretary-treasurer, Dr. William M. Leiserson, had resigned, owing to the fact that he is no longer connected with public employment office work.

An address of welcome was given by a representative of the mayor of the city of Buffalo, after which the first speaker on the program, Hon. Royal Meeker, United States Commissioner of Labor Statistics delivered an address on "What records should be kept by public employment offices and how used." Other speakers on this subject were Charles F. Gettemy, director of the Bureau of Statistics, State of Massachusetts, and Mr. G. P. Berner, superintendent of the Buffalo branch of the New York State Bureau of Employment. The subject was then opened for general discussion.

At the afternoon session, the first subject for discussion was "How can cooperation among Federal, State, and city employment bureaus be effected." The opening speaker on this subject was Miss Hilda Muhlhauser, who is connected with the United States Department of Labor. She was followed by Mr. Luke D. McCoy, secretary of the Illinois Bureau of Labor Statistics.

The next subject for discussion was "A national system of employment offices: How shall it be organized." The first speaker was the Hon. William B. Wilson, Secretary of Labor, Washington, D. C. Mr. Wilson discussed the urgent need for public employment offices and showed the advantage which could be secured by a national employment bureau cooperating with State and municipal bureaus, helping to coordinate the work between the different States and cities of the country. Mr. Jacob Lightner, director of the Public Employment Bureau of Pennsylvania, and Mr. Joseph Spitz, director of the Public Employment Bureau of New Jersey, also spoke on this subject.

"Juvenile placement departments: Their connection with vocational guidance and trade schools" was the first subject discussed at the Friday morning session. Mr. Alvin E. Dodd, secretary of the National Society for Promotion of Industrial Education, New York City, was the first speaker, followed by Mr. Warren W. Zurbrick, chairman of the vocational guidance committee, Buffalo, N. Y., Miss Rachael Gallagher, director of the Girls' and Women's Bureau, Cleveland, Ohio, and Mr. George D. Halsey, vocational counselor, Atlanta, Ga.

"Special problems in the women's departments" was discussed by Mrs. Samuel Semple, member of the industrial board of the Department of Labor and Industries, State of Pennsylvania, and by Miss Louise C. Odencrantz, superintendent of the women's department, Brooklyn branch, New York State Bureau of Employment. Miss Florence Burton, head of the women's department of the Minneapolis Public Employment Office, was unable to be present but sent a very interesting paper on this subject.

At the afternoon session, Mr. Robert G. Valentine, industrial counselor, Boston, Mass., delivered an address on "Labor organizations and public employment offices: How they can be mutually helpful."

Mr. Meyer Bloomfield, director of Vocational Guidance Bureau, Boston, and Mr. A. L. Filene, member of the firm of William Filene Sons' Co., Boston, delivered addresses on the subject, "Employment managers' associations: Employers and public employment offices."

"How shall suboffices of a public employment office be conducted within a city" was discussed by Charles J. Boyd, general superintendent, State Employment Bureau, Chicago, and by Walter E. Kruesi, superintendent of the Municipal Public Employment Office, New York City.

This ended the regular program and it was followed by reports of committees, selection of standing committees, and election of officers. Although the regular appointed speakers filled in most of the time allotted to each one of the subjects mentioned, many delegates expressed their views on different questions in three-minute speeches. After the regular program, several questions affecting the daily work of public employment offices were brought up and interesting discussions followed. On Saturday morning, July 22, there was an informal meeting of the association, held in the Buffalo office of the State public employment bureau. At a round-table discussion many other questions on the routine work were threshed out by the delegates.

A committee on standardization was selected, composed of Hon. Royal Meeker, chairman; Charles F. Gettemy, director, Bureau of Statistics, Massachusetts; H. J. Beckerle, superintendent, Public Employment Office, Milwaukee, Wis.; C. H. Mayhugh, superintendent, Cleveland State-City Public Employment Office; and Luke D. McCoy, secretary, Illinois Bureau of Labor Statistics. This is a standing committee for the purpose of drawing up a system of uniform records and formulating standard definitions of terms and methods of work which can be used in all the offices throughout the country, to the end that there shall be uniformity in the figures and reports from all the States. It is the duty of this committee to select from all the systems and methods now in use the best and most efficient, and its report at the next annual meeting will be the most important thing on which the association will have to act.

Among the important resolutions adopted by the meeting was one placing the association on record in favor of the establishment of a national employment bureau. The association also passed a resolution requesting Hon. Royal Meeker, United States Commissioner of Labor Statistics, to edit and publish the proceedings of the convention in the form of a bulletin of the Bureau of Labor Statistics. The Commissioner of Labor Statistics was further requested to publish in the MONTHLY REVIEW the figures of the Canadian public employment offices in conjunction and comparison with those of the State, municipal, and other public bureaus of the United States, provided such publication is permissible.

This fourth annual meeting of the association was most successful. The prevailing note was the deep interest manifested by everybody attending it. All the addresses were listened to attentively and the members showed that they were attending the meeting for the purpose of learning how to conduct better their respective bureaus and offices.

The officers chosen for the next year are: President, Charles B. Barnes, director, State Public Employment Bureau of New York; vice presidents, Hilda Muhlhauser, Cleveland, Ohio; H. J. Beckerle, Milwaukee, Wis.; J. D. Maloy, Saskatchewan, Canada; and George D. Halsey, Atlanta, Ga.; secretary-treasurer, G. P. Berner, superintendent of the Buffalo branch of the State Public Employment Bureau of New York.

The place chosen for the next meeting is Milwaukee, Wis., and the time September 20 and 21, 1917.

SPECIAL MEETING OF THE SAFETY COMMITTEE OF THE INTERNATIONAL ASSOCIATION OF INDUSTRIAL ACCIDENT BOARDS AND COMMISSIONS.

An informal meeting of the Safety Committee of the International Association of Industrial Accident Boards and Commissions was held at Buffalo, New York, July 18, 1916. The members present were Chairman Victor T. Noonan, director of safety, Columbus, Ohio; Leonard W. Hatch, chief statistician, New York Industrial Commission; Edwin Mulready, commissioner of labor of Massachusetts; John Roach, chief of the Bureau of Sanitation and Hygiene, Department of Labor, New Jersey, and Fred M. Wilcox, member of the Industrial Commission of Wisconsin.

The principal purpose of this meeting was to arrange for the next meeting, which will be held in Detroit, at the Hotel Statler, on October 18, 1916, during the safety congress of the National Safety Council. The committee, however, thoroughly discussed the question of safety goggles. In view of the fact that it is difficult to get all workmen to wear even the best goggles, it was decided to call the attention of manufacturers to the importance of making goggles that workmen will not object to wearing.

In order the better to secure cooperation between the various State agencies Dr. Royal Meeker, United States Commissioner of Labor Statistics, was appointed a member of the committee by the chairman.

CITIZENSHIP CONVENTION UNDER THE AUSPICES OF THE BUREAU OF NATURALIZATION.

Under the auspices of the Bureau of Naturalization there was held, during the week of July 10, 1916, in the city of Washington, the first convention of the kind ever held in the United States—a "citizenship convention"—attended by public-school superintendents, principals, and teachers from various parts of the United States, representing the 650 cities and towns where the public schools have cooperated with the Bureau of Naturalization in the preparation for citizenship of the candidate for that estate by naturalization. This convention was also participated in by Government officials representing the legislative, executive, and judicial branches of the Government, and the staff of field officers of the Bureau of Naturalization, by whom speeches and addresses were made.

The convention was called to order on Monday, July 10, at 10 o'clock, by the Deputy Commissioner of Naturalization, Raymond F. Crist, who presided at each of the five sessions, the last one being held on Friday, July 14.

In calling the convention to order, the Deputy Commissioner of Naturalization referred to it as having a two-fold object, first, to consider the problems and advancement during the past year, and, second, to discuss the textbook for each candidate for citizenship who enters the public schools, which it is the purpose of the Bureau of Naturalization to prepare and issue, in response to a call from the many organizations interested in the Americanization work of the public schools and the bureau.

During the past year citizenship was taught, commencing at the opening of the school year with a small number of public schools. The number of cities and towns responding to the call for cooperation with the Bureau of Naturalization grew to 650 in 44 States, with favorable responses from the public schools of every State in the Union. Those States not furnishing data as to cities or towns whose schools could cooperate, offered full assurances of doing so with the opening of the school year in the fall of 1916.

The Bureau of Naturalization sent the names of over 200,000 candidates for citizenship, including the names of their wives, to the public schools in the 44 States. The work has been indorsed by the various organizations devoted to philanthropic, civic, and national betterment, by commercial bodies, by church organizations, and all others concerned.

Oliver P. Newman, Commissioner of the District of Columbia, gave an address of welcome to the delegates, and an address of welcome on the part of the public schools of Washington was delivered by

Ernest L. Thurston, superintendent of schools of the District of Columbia.

Louis F. Post, Assistant Secretary of Labor, in an address of welcome on behalf of the Department of Labor, described the official relationship of that department to the Bureau of Naturalization and to the citizenship convention. He described the course of legislation which led to the creation of an executive department devoted to the interests of labor. Quoting from his address with reference to the Bureau of Naturalization:

> The Bureau of Naturalization, which is one of four bureaus in the Department of Labor, is alone specifically charged with the whole subject of naturalization in a supervisory and administrative way. Once an alien has declared his intention to become a citizen, two duties devolve upon the Bureau of Naturalization: One is to see that the court does not improvidently admit him to citizenship; the other function is to try to see to it that every alien who makes that declaration shall be fitted for citizenship when he comes before the court, which is two years at least after his declaration of intention. Now, it is in furtherance of those two functions that this conference is gathered. Its object is to bring the statutory powers of the Department of Labor and its Bureau of Naturalization into a union with the opportunities for promoting good citizenship that offer themselves to those who do teaching in the United States.

Commissioner Richard K. Campbell, of the Bureau of Naturalization, emphasized the need for teaching the principles of the Constitution and the spirit of the Golden Rule as being essential in all instruction, if the true spirit of America for humanity is to be imparted to the citizenry of this country, whether it be of native or foreign birth.

Robert S. Coleman, chief naturalization examiner for the district of St. Paul, Minn., reviewed the work of the Bureau of Naturalization in cooperation with the public schools throughout his district. His remarks dwelt upon some of the difficulties encountered in the organization of night classes under varying conditions of failure of provision by law for the use of public funds for this purpose and the great expanse of territory to be covered. A picture was presented of the cooperation of the public schools with the Naturalization Bureau, under widely varying conditions.

Clarence B. Miller, Representative in Congress from Minnesota, gave a graphic illustration of the Americanizing influence of the public schools in the Philippines and Hawaii by means of motion pictures.

Hon. Josephus Daniels, Secretary of the Navy, referring to the cooperative work between the public schools and the Bureau of Naturalization, said:

> Our schoolhouses are the only institutions we have that do business only three-fourths of the year. There is no business house in the country that could live and close one-fourth of the time. We are learning that the schoolhouse must be the social

> center, the clearing house, and if we want to find the best type of American citizen who lives in this land, you find it in those brought up in the history of American independence; but the fathers, the adults, they need this education you are giving them. You are the pioneers of a great work. It must spread and must grow in every community, and it must be done not only for the good of the man coming among us, but for our own good, because unless we lift up our fellows they will draw us down.

Samuel Gompers, president of the American Federation of Labor, indorsed this cooperative work between the public schools and the Bureau of Naturalization. He said:

> I know of no more important function that the Naturalization Bureau of the Department of Labor could render than the education and the Americanization of the men and the women who come from foreign shores. * * * I hold it to be the duty of every agency of government and civic bodies and the individual citizens to help in the movement that shall merge the people coming here from every clime into one great whole, the people, the citizenship of the United States of America.

Philander P. Claxton, Commissioner of Education, gave an address on "Preparation for American citizenship and life." The Bureau of Naturalization is not in possession of a manuscript of this address, but it is expected that the full proceedings will contain it complete.

Mrs. Cora Wilson Stewart, president of the Kentucky Illiteracy Commission, Frankfort, Ky., gave a description of her work, of which the bureau has no manuscript. It is hoped that, with the publication of the full proceedings, her remarks will be found therein.

Representative Albert Johnson, of the State of Washington, gave an illustrated address on "Outdoor school work in Tacoma."

A general discussion of the subject-matter of the textbook was participated in by the delegates to the convention, advance transcripts of which had been placed in the hands of several of those most prominently before the bureau during the past year. The textbook was prepared as a direct response to the call of those engaged in the instruction of the foreigner in citizenship responsibilities. Many valuable suggestions were received, and the general voice of the meetings was that the bureau should proceed with its work and produce a textbook in accordance with its plans.

In June, 1915, the Deputy Commissioner of Naturalization presented the plans of the Bureau of Naturalization for securing the attendance upon the public schools of the candidates for citizenship to Dr. William M. Davidson, superintendent of schools of Pittsburgh, Pa. Dr. Davidson said that this plan solved one of the greatest problems with which he had been confronted for some time, and it answered the question, "How can I get the candidate for citizenship into the Pittsburgh public schools?"

J. M. Berkey, director of special schools and extension work of the Pittsburgh public schools, told of the experiences of the schools in their cooperation with the Bureau of Naturalization in this work. His discussion was limited to the conditions and needs for Americanization in the large cities, although recognizing the necessity for its extension to rural communities.

William M. Ragsdale, chief naturalization examiner, referred to the work of the Bureau of Naturalization in cooperation with the public schools throughout the Pittsburgh district.

The President of the United States was present and addressod the convention. The following is quoted from his address:

> It is not fair to the great multitude of hopeful men and women who press into this country from other countries that we should leave them without that friendly and intimate instruction that will enable them very soon after they come to find out what America is like at heart and what America is intended for among the nations of the world. I believe that the chief school that these people must attend after they get here is the school which all of us attend which is furnished by the life of the community in which we live and the nation to which we belong.
>
> It is easy, my fellow citizens, to communicate physical lessons, but it is very difficult to communicate spiritual lessons. America was intended to be a spirit among the nations of the world, and it is the purpose of conferences like these to find out the best way to introduce the newcomers to this spirit, and by that very interest in them to enhance and purify in ourselves the thing that ought to make America great, and not only ought to make her great, but ought to make her exhibit a spirit unlike any other nation in the world.
>
> My interest in this movement is as much an interest in ourselves as in those whom we are trying to Americanize, because if we are genuine Americans they can not avoid the infection, whereas if we are not genuine Americans there will be nothing to infect them with, and no amount of teaching the Constitution (and I find very few persons understand it), no amount of dwelling upon the idea of liberty and justice, will accomplish the object we have in view, unless we ourselves illustrate the idea of justice and of liberty.

L. R. Alderman, superintendent of schools, Portland, Oreg., told what Portland is doing to Americanize foreigners. He showed that during the past three years the attendance upon the night schools in Portland had increased from 1,817 to over 6,000. He pointed out that last year there were 26 nationalities represented in the schools.

Hon. William B. Wilson, Secretary of Labor, was called from the city and detained during the period of the convention.

Frederick L. Siddons, associate justice of the Supreme Court of the District of Columbia, dwelt upon the fact that while a decree of naturalization converts the alien to an American citizen by title, it falls far short in a large number of cases at least in accomplishing the purpose in fact. An examination of the reasons for this showed that in the past we have not insisted upon an education in American citizenship. He referred to the inability of the administrative officials and the courts to accomplish all that is desirable in the spread of the gospel of American citizenship without the aid of the public school teachers of the country.

M. J. Downey, assistant director of evening and continuation schools of Boston, Mass., said that in Boston advanced classes in citizenship were established during the past year as a result of correspondence and conferences previously had with the Bureau of Naturalization. Among other activities developed were the establishment in the English high school of classes of instruction in English and citizenship to non-English speaking people, and the establishment of afternoon classes for foreign-born women engaged in various occupations in the evening.

I. Walton Schmidt, secretary of the Industrial Welfare Department, Board of Commerce, Detroit, Mich., gave the business man's viewpoint of the cooperative work of the public schools and the Bureau of Naturalization. He stated that the public schools of Detroit and the Bureau of Naturalization had worked together during the past year to conduct and extend the educational work, especially among the candidates for citizenship.

Andrew H. Melville, member, State Conference Board on Industrial Education and chief of the Bureau of Civic, Commercial, and Community Development, University of Wisconsin Extension Division, Madison, Wis., spoke of the cordial support with which the entire public-school system of the State of Wisconsin offered its cooperation in the education of the foreigner for citizenship responsibilities.

The convention was brought to a close by the presiding officer in a résumé of last year's work. Arrangements are being made for the publication of the entire proceedings of the convention.

THE FEDERAL CHILD LABOR BILL.

A bill entitled "An act to prevent interstate commerce in the products of child labor, and for other purposes," known as "The Child Labor Bill," which passed the House of Representatives on February 2, 1916, was amended and passed by the Senate on August 8. The conference report recommending the adoption of the amended Senate bill was agreed to by the House and Senate on August 18 and 19, respectively.

STRIKES AND LOCKOUTS, FEBRUARY TO JULY, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months, February to July, 1916, inclusive, was 1,865. The number similarly compiled during the corresponding months of the year 1915 was 543.

The following table shows the number of strikes and lockouts begun in each of the months February to July, 1916, inclusive, together with 162 strikes and lockouts reported as having occurred during that period, although the month in which they began was not reported. The number of strikes compiled during the corresponding months of the year 1915 is also given. In comparing these figures it must be borne in mind that, although the number of strikes in 1916 has undoubtedly been larger than those in the corresponding months of 1915, the sources of the bureau in obtaining data in regard to strikes have also increased, and the difference between the two years is therefore not so great as the figures would tend to show. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, FEBRUARY TO JULY, INCLUSIVE, FOR 1916 AND 1915.

Kind of dispute.	February.	March.	April.	May.	June.	July.	Month not stated.	Total.
Strikes:								
1916	159	218	321	496	250	199	153	1,796
1915	45	75	91	111	54	94	....	470
Lockouts:								
1916	5	8	13	16	16	2	9	69
1915	12	14	16	11	6	14	....	73
Totals:								
1916	164	226	334	512	266	201	162	1,865
1915	57	89	107	122	60	108	....	543

The above columns include disputes that began in the months indicated only, and are subjected to monthly revision. More detailed accounts of the disputes reported for each month preceding July may be found in former numbers of the REVIEW.

DISPUTES REPORTED DURING JULY, 1916.

The number of strikes during July shows a marked decrease from that during the preceding four months, and most of these were local in character, attracting but little attention from persons not directly connected with them. The number of machinists' and molders' strikes decreased. The miners in Pennsylvania and Ohio have shown a disposition to settle down to work, and although their strikes still continue to be numerous, most of them have been short in duration. Among the strikes that attracted attention were those of the packing-house workers in East St. Louis; rubber workers in Chelsea, Mass.; cigar makers in Detroit; barbers in Brooklyn; cracker bakers in Denver; the street railway strikes in New York City, Harrisburg, Memphis, and in Portland, Me.; the strikes in the textile mills in Pennsylvania; and the strike of the insurance agents in New York, New Jersey, and Pennsylvania. The strikes in the New York garment industry and of the cement workers in Illinois continued through the month, and the strike of the Pacific coast longshoremen came to an end.

The data in the following tables relate to 327 strikes and lockouts concerning which information was received by the bureau during the month of July. These include, in addition to the 201 strikes and lockouts which began in July, 117 strikes and 9 lockouts which were reported during the month, but began as follows: Fifty-five strikes and 4 lockouts in June, 21 strikes and 1 lockout in May, 6 strikes and 2 lockouts in April, 5 strikes in March, 6 strikes in February, 1 strike and 1 lockout in January, and 23 strikes and 1 lockout the dates of commencement of which were not reported, but most of which probably occurred in June or July. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for July will show an increase over the number of strikes herein reported for that month.

Of the disputes reported during July, 29 strikes and 1 lockout occurred east of the Mississippi and south of the Ohio and Potomac Rivers, 42 strikes and 1 lockout west of the Mississippi, and the remaining 245 strikes and 9 lockouts in the district north of the Ohio and Potomac Rivers and east of the Mississippi. More than one-half of these strikes occurred in three States.

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS WERE REPORTED DURING JULY, 1916.

State.	Strikes.	Lockouts.	Total.
Pennsylvania	72	1	73
New York	49	4	53
Massachusetts	36	3	39
Ohio	22		22
Connecticut	17	1	18
New Jersey	13		13
Missouri	12		12
Illinois	10		10
Porto Rico	10		10
Colorado	7		7
Tennessee	6	1	7
California	6		6
Wisconsin	6		6
Indiana	5		6
23 other States	45	1	45
Total	316	11	327

Seven strikes were confined to women; 14 strikes and 1 lockout included both men and women; in 28 strikes and 1 lockout the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING JULY, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades	42	2	44
Mining	43		43
Building trades	37	1	38
Railroads	19		19
Bakers	14	4	18
Clothing industries	17		17
Textile workers	15		15
Brewery workers	10	2	12
Street railways	12		12
Iron and steel mills	10		10
Cooks and waiters	6		6
Quarrymen	6		6
Tobacco workers	6		6
Teamsters	5		5
Street laborers	5		5
Butchers	4		4
Furniture workers	4		4
Longshoremen and freight handlers	4		4
Rubber workers	4		4
All others	53	2	55
Total	316	11	327

Included in the above are 21 strikes and 2 lockouts of machinists, and 14 strikes of molders; 40 of the mining strikes were in coal mines.

In 163 strikes and 9 lockouts the employees were connected with unions; in 10 strikes they were not so connected; in 3 strikes they were not connected with unions at the time of striking, but became organized during the course of the strike; in the remaining 140 strikes and 2 lockouts it was not stated whether the strikers had union affiliations or not.

In 270 cases the causes of the strikes and lockouts were given. In 70 per cent of these the questions of wages or hours, or both, were prominent. The principal causes are shown in the following table:

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING JULY, 1916.

Cause.	Strikes.	Lockouts.	Total.
For increase of wages	102		102
Because of reduction of wages	1	1	2
For decrease of hours	10	1	11
For increase of wages and decrease of hours	35		35
Because of unpaid wages	2		2
General conditions	3		3
Conditions and wages	7		7
Recognition and closed shop	11	3	14
Recognition and wages	14		14
Recognition and hours	3		3
Recognition, wages, and hours	6		6
Because of discharge of employees	21		21
Because of employment of nonunion men	9		9
In regard to the agreement	14		14
Sympathy	2		2
Over price of powder in mines	4		4
Miscellaneous	21		21
Not reported	51	6	57
Total	316	11	327

In 138 of the strikes the number of persons involved was reported to be 94,672, an average of 613 per strike. In 27 strikes, in each of which the number involved was over 1,000, the strikers numbered 73,641, thus leaving 21,031 involved in the remaining 111 strikes, or an average of 189 in each. In 5 lockouts, in no one of which were over 100 persons involved, the number of employees was reported to be 202, or an average of 40 per strike.

In 220 strikes and 7 lockouts only one employer was concerned in each disturbance; in 14 strikes and 1 lockout, 2 employers; in 5 strikes and 1 lockout, 3 employers; in 7 strikes, more than 3; in 70 strikes and 2 lockouts the number of employers was not stated.

In 85 strikes reported as ending in July, 19 were won, 21 lost, 37 compromised; in 1 the strikers returned to work under promise of the employer to arbitrate the matters in dispute; in 7 the result was not reported. No lockouts were reported as ending in July. The duration of 62 of these strikes was given as follows: One day or less, 10; 2 to 3 days, 9; 4 to 7 days, 11; 1 to 2 weeks, 12; 2 weeks to a month, 10; 1 to 3 months, 6; 5 months or over, 4. The duration of the 58 strikes that lasted less than 3 months was 784 days, or an average of 14 days each.

NEW AGREEMENT IN CLOAK, SUIT, AND SKIRT INDUSTRY IN NEW YORK CITY.

The strike in the cloak, suit, and skirt industry in New York City, which began on April 28, 1916, was terminated on August 4, when a new agreement was signed by representatives of the Cloak, Suit, and Skirt Manufacturers' Protective Association and of the International Ladies' Garment Workers' Union, and the Joint Board of Cloak Makers' Unions of the city of New York.

The Protective Association is reported as including in its membership 419 firms, employing 23,000 persons. The total number of employers in the cloak, suit, and skirt industry in New York City, including members of the Protective Association, is estimated to be 2,200, and the total number of employees to be 45,000.

The following is a reprint of the agreement:

This agreement, made and entered into this 24th day of July, 1916, by and between the Cloak, Suit, and Skirt Manufacturers' Protective Association, hereinafter styled the association, and the International Ladies' Garment Workers' Union and the joint Board of Cloak Makers' Unions of the City of New York, composed of and representing Cloak Operators' Union No. 1, Piece Tailors and Sample Makers' Union No. 3, Cloak and Suit Tailors No. 9, Amalgamated Ladies' Garment Cutters' Union No. 10, Cloak and Skirt Makers' Union of Brownsville No. 11, New York Reefer Makers' Union No. 17, Skirt Pressers' Union No. 35, Italian Branch Cloak Makers Union No. 23, Cloak and Skirt Makers' Union No. 48, and Buttonhole Makers' Union of New York No. 64, all collectively designated as the union, contracting herein for and in behalf of the said unions and for and in behalf of the members thereof, now employed and hereafter to be employed by the members of the association, witnesseth:

Whereas, the association is composed of a large number of manufacturers engaged in the cloak, suit, and skirt industry in the city of New York, and the union represents the workers in the said trade, and

Whereas, the parties hereto desire to establish terms and conditions upon which members of the union shall work for members of the association.

Now, therefore, the parties hereto agree as follows:

PREFERENTIAL UNION SHOP.

1. The association recognizes the union and agrees that its members will give preference to union workers when hiring help. The association also agrees that its members will not discriminate in any manner against their workers for union membership or activity. A union worker, within the meaning of this provision, shall be a worker who proves his union membership to the satisfaction of the employer or his representative, and of the chairman of the price committee.

49-HOUR WEEK.

2. A week's work shall consist of forty-nine (49) hours in six (6) week days, divided as follows: On the first five working days of the week work shall begin at 8 o'clock and continue until 6 p. m., with one hour interval for lunch. On Saturdays work shall be done from 8 a. m. until noon. Workers observing Saturday as the day of the Sabbath may work on Sunday instead.

OVERTIME RULES.

3. (*a*) No overtime work shall be exacted or permitted in the manufacture of cloaks and suits between November 15th and February 1st, nor between April 15th and August 15th. Manufacturers engaged in special lines, such as the manufacture of skirts, pile fabrics, linens, and summer goods, shall have the right to establish periods different from those above stated, according to the demands of their business, provided that such periods shall in all cases cover the slack seasons in their special lines, and shall in all cases aggregate six months in the year.

10 HOURS OVERTIME WEEKLY.

(*b*) In the seasons in which overtime is permitted, such overtime shall not exceed 10 hours in any week, nor 2½ hours in any day, and shall be restricted to the first 5 working days of the week. Additional overtime shall not be permitted except in cases of emergency, and then only with the consent of the union.

4. Week workers shall receive double rate of pay for overtime.

NEW WAGE SCHEDULE.

5. All cutters, pressers, sample makers, drapers, skirt basters, and skirt finishers shall work by the week, and the minimum weekly wage for such workers shall be as follows:

Cutters	$29.00
Skirt cutters	25.00
Jacket upper pressers and reefer upper pressers	26.50
Skirt upper pressers	24.00
Skirt under pressers	19.00
Piece pressers	16.50
Jacket under pressers and reefer under pressers	22.00
Sample makers	24.00
Drapers	16.00
Skirt finishers	12.00

Buttonhole makers shall be paid as follows:

For unfinished buttonholes a minimum of 95 cents per 100 buttonholes; for finished buttonholes a minimum of $1.35 per 100 buttonholes.

FOR OTHER BRANCHES OF TRADE.

6. Workers engaged in branches of the trade not above enumerated shall be paid by the piece, unless the employer and his workers in any such branch agree upon week work. In the latter case week work shall be permitted, provided:

(*a*) That wages be settled between the employer and the union, and

(*b*) That if week work is introduced, it shall apply to the inside shop and to all contractors' shops employed by the firm.

PIECE RATES.

7. (*a*) Piece rates shall be settled between the employer and the price committee of the workers in his shop in the presence of the chairman of such committee, or of a temporary chairman in the absence of the latter. The price committee shall be elected by such employees at a regular shop meeting from among workers who have been employed in that shop not less than one to three months, if possible.

EXPERT PRICE ADJUSTERS.

(*b*) If the employer and the price committee fail to agree upon the prices of any garment or garments, then upon request of either side an expert price adjuster shall be called in, and his decision on such dispute or disputes shall be final.

(*c*) Such price adjuster shall be secured in the following manner: As soon as practicable the parties hereto shall establish a price-adjusting board, which board shall consist of three representatives appointed by the association and three representatives appointed by the union. The board shall appoint an expert price adjuster who, with the consent of the board, may engage such and so many assistant price adjusters as may be from time to time required.

The expert price adjuster and the assistant price adjusters shall operate under the direction of the board and shall be provided with a proper office separate and apart from the association and the union, and all expenses connected with the said board and the said adjusters shall be borne equally by the parties hereto.

FOR THE PRESENT.

(*d*) Until the organization of the said board and the appointment of the price adjuster and his complete staff the present method of adjusting price disputes shall continue; i. e., separate price adjusters, one selected by the association and one selected by the union, shall be called in at the request of either party and shall adjust the dispute jointly.

NOTE.

(*e*) All prices once regularly settled shall remain settled.

75 CENTS AND 55 CENTS HOURLY.

8. (*a*) Upon the adjustment of piece rates, prices shall be computed on a basis, as far as possible, of a yield to the operator and piece tailor of average skill and experience of 75 cents an hour for each hour of continuous work, and to the finisher of average skill and experience of 55 cents an hour. A finisher of average skill is one who is qualified to do all finishing work.

The said rates of 75 cents and 55 cents, respectively, shall not be considered either as a minimum or as a maximum, but as a basis for computation.

9. Workers shall not be required to work on garments (except duplicate samples) before a settlement of prices has been made.

A BONUS.

10. A bonus, the amount of which shall be determined between the employer and the price committee at the time of price making, shall be paid on all duplicate samples upon which the price has not been settled.

11. All wages shall be paid weekly on a fixed day and in cash.

LEGAL HOLIDAYS.

12. All week workers shall be paid for the following legal holidays, to wit: Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas, and such holidays shall be observed. Workers may also refrain to work on the first day of May, but without pay.

(*f*) Italian workers may refrain from work on Columbus Day, without pay.

13. (*a*) No contracting or subcontracting within the shop shall be permitted.

(*b*) No work shall be given to employees to be made at home.

(*c*) No operator or finisher shall employ more than one helper.

(*d*) The employer shall be responsible for the payment of wages of all liners working for piece tailors.

NO CONTRACTS.

14. There shall be no time contracts with individual shop employees, except foremen, designers, and pattern graders.

15. The employer shall furnish all employees with sewing machines driven by electric power and with all material and requisites of work.

REGISTRATION OF CONTRACTORS.

16. (*a*) All members of the association shall register with the association and the association shall register with the union all names and addresses of all contractors whom they employ or who do work for them.

(*b*) The association assumes the following guaranties for the contractors thus to be registered:

1. That such contractors will maintain in their shops proper sanitary conditions to the satisfaction of the joint board of sanitary control.

2. That such contractors will maintain the standards of wages, hours, overtime, holidays, and other shop standards provided for in this agreement.

3. That they will pay for work done on garments of members of the association, and if the contractors should default in the payment of such wages the association members will pay the same to the extent of the work done on their garments: *Provided*, That notice of default is given to such association members within one week after such default.

4. Prices of garments made in contractors' shops only shall be settled in the inside shop by a joint price committee representing the workers of all contractors employed by the firm, and the contractors may be present at such settlements.

5. Garments upon which prices have been settled in the inside shop may be made in the contractors' shops at the prices settled, with a deduction of 10 per cent upon the prices of finishing and 15 per cent upon the prices of operating.

But such deductions shall not affect hourly base rates provided in the agreement.

(c) A contractor, within the meaning of the above provisions, shall signify one who makes up garments from material delivered to him in cut form by a member of the association.

17. The joint board of sanitary control existing in the industry shall be continued at joint expense.

18. The parties hereto agree to adopt, as soon as practicable, and not later than within 60 days, suitable rules for the regulation and grading of apprentices in the various branches of the industry.

19. The employer shall be free, according to the dictates of his business, to increase or decrease the number of his employees to meet the conditions in his factory, and to retain such of his employees as he may desire on the basis of efficiency.

20. There shall be no strike, general or individual, and no stoppage of work in any shop so long as the employer shall observe the provisions of this agreement on his part; nor shall there be any lockout, general or individual, so long as the workers shall observe the terms of this agreement on their part.

The association agrees to enforce the performance by its members of all the expressed provisions of this agreement on their part to be performed. If after investigation on the part of the union, the union shall establish by proper proof to the association that there has been a violation of any of such provisions, the association will remedy any such violation and in a proper case will discipline its members therefor. The same applies to the union.

The workers, however, shall have the right to strike against any employer who exercises the power to increase and decrease his working force, as above set forth, arbitrarily and oppressively, or who violates any express provision of this agreement.

The union shall neither call nor sanction any shop strike until at least 24 hours shall have elapsed after it shall have given notice of the grievance to the employer; nor shall the association order or sanction any shop lockout until 24 hours' similar notice to the employees.

This agreement shall enter into force on the date of its execution, and shall continue for three years.

STREET RAILWAY STRIKE IN NEW YORK CITY.

The recent street car strike in New York City, which largely tied up the Third Avenue system and threatened to spread throughout the entire city, was amicably settled on August 7 through the efforts of the Public Service Commission for the First District, after an investigation lasting three days, an account of which is set forth in a memorandum issued by the Commission under date of August 10. The strike began on the Yonkers and Westchester lines, extended to the Union Railway in the Bronx, and then to the entire Third Avenue system. On Wednesday, August 1, the commission retained Julius Henry Cohen as special consul to the commission. The first hearing was held on Wednesday afternoon, August 2, and proceeded from day to day until Friday, August 4, at which time the following public statement was made:

Without making any formal finding at this time, the evidence already discloses a situation which the commission feels should be brought to the attention of both parties.

It appears that President Whitridge, of the Third Avenue system, in 1913, entered into an agreement with the men on the Yonkers and Westchester lines that all differences between them were to be arbitrated; and that even the question whether or not a difference at issue was arbitrable should also be submitted to arbitration..

There appears to be no dispute that the men on the Yonkers and Westchester lines not only were ready to arbitrate the differences between them, but they asked for the opportunity to arbitrate them.

Mr. Maher, sr., testified that, in his opinion, Mr. Whitridge overlooked or forgot this agreement to arbitrate, so that on the 11th day of July the situation was that there was in existence an agreement to arbitrate all differences between the parties, and the resolution adopted by the directors on June 26 last placed exclusively in Mr. Whitridge's hands the handling of the matter with the men.

It is already testified by Mr. Maher, sr., that this authority having been vested in Mr. Whitridge (who left for Europe on the 15th of July), he, Mr. Maher, felt that he had no authority to deal with the situation.

It was this omission or failure, in our opinion, to deal with the situation in accordance with the agreement with the men, made in 1913, that precipitated, if it did not cause, the strike on the Yonkers and Westchester divisions.

In the conference between Mr. Whitridge and the men, Mr. Whitridge contended that the matter of wages or scale of wages should be treated as one scale for the entire Third Avenue system. It is evident that efforts were already under way to organize the men on the Third Avenue system. These efforts, it would appear, were accelerated by the strike on the Yonkers and Westchester lines, releasing the men to meet with and organize their brothers on the remainder of the Third Avenue system.

There can be no question that the strike on the Yonkers and Westchester lines and the events which followed in the train of this strike, including the strike on the other branches of the Third Avenue railroad and the threatened difficulties with the lines of other companies throughout the city, came about as the immediate and logical result of the attitude of Frederick W. Whitridge, president of the Third Avenue railroad, and the actions he took in the matter prove conclusively that he either intentionally violated the agreement he made with the men to arbitrate and which he was in honor bound to keep, or that he was so negligent in his duties to his stockholders, his employees, and the public, as to forget entirely this important agreement.

We have already developed the fact that there is no real difficulty that stands in the way of the parties getting together. On both sides there is a willingness to arbitrate the only question of wages and working conditions that has thus far been presented. Indeed, the union has stated that it is legally bound by its constitution to arbitrate all differences before declaring a strike. The difficulty—apparent but not real—seems to be that the men believe that they would be prevented from exercising their legal right to organize. The statements of counsel for the Third Avenue system and of the manager now make clear that whatever the personal feelings of any officer may be, the Third Avenue railroad is not as a railroad opposed to the organization of the men and recognizes clearly their legal and moral right to organize.

On the other hand, the men take the position that they do not desire the settlement of their grievances by any outsiders, but that all grievances shall be adjusted by committees of the men on the lines with their employers, and in explaining what they mean by recognition of the union, they have stated that they do not mean a closed shop, nor the exclusive employment of union men, nor the interference by the union with the management of the railroad.

We think that this investigation has already developed points upon which the differences between the men and the officials of the railroad can be adjusted. We have been assured by counsel for the railroads that a meeting of the board of directors is to be held next Monday, at which authority is to be vested in some one in the absence of Mr. Whitridge.

> Without waiting for our complete findings upon the evidence, we now recommend that both sides get together, as it is apparent from the foregoing recital there are no substantial differences between them which justify the continuance of the conditions that now exist, and we believe that if they take up this matter promptly in the spirit in which the commission recommends, they will certainly arrive at a speedy and satisfactory conclusion.

After listening further to counsel for both sides, the Commission adjourned until the following Monday, in order to permit the Third Avenue Railway Co. to hold a meeting of its directors and to authorize some one to act and to give the parties opportunity to agree. In the meantime the Commission, on Saturday morning, August 5, expressed its opinion upon the entire situation in the following words:

> The right of men freely to organize is a legal right no longer subject to question. The right of men freely to select spokesmen or advisers is a corollary of this right. The right to deal or to decline to deal collectively with an organization is likewise a legal right. So, too, the right to employ or to refuse to employ members of a certain organization is a legal right, justified morally in its exercise, according to the circumstances of each case. But the right of the State to have its public utilities operated safely, efficiently, and continuously is also a legal right. Which of these rights is paramount—the rights of the people, or the rights of workers or employers? Whatever the application of these rights may be in private ventures, the right and the duty of the State in respect to its public utilities are clearly paramount. It is true that none of these rights—of the State, the worker, or the employer—are arbitrable. But the adjustment of these rights so that each may be respected and properly balanced involves important considerations. While all of these parties have clear *rights*, the manner of exercising them is of the highest importance. The methods commonly accepted as moral are the methods of argument and persuasion, and the methods commonly condemned are those of coercion or oppression. Neither should the men coerce acceptance of their views, nor the company coerce acceptance of its views. Even if the company has the legal right to discharge union men, it is questionable whether it can justify itself on moral grounds.
>
> With public utilities, where the necessities of the people depend upon their operation, it should not be permitted to any group of men, be they employees or employers, to inconvenience and bring distress upon the whole people for the purpose of securing acquiescence with its views. This is to substitute coercion arising out of the necessities of the public for persuasion as a method for securing recognition of concededly nonarbitrable rights. The consideration of the method is an arbitrable matter.
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> These principles, in the main, were applicable to the existing situation and were confirmed by the previous conduct of the parties by their agreements.

The memorandum thereupon briefly reviews the facts as to the strike in 1913 on the Yonkers Railroad now part of the Third Avenue system. It seems that prior to that year an unwritten agreement had been made by which the men were to be dealt with through their organization and with committees of the men employed on the lines. A similar agreement was made with Mr. E. A. Maher, sr., then manager of the Westchester lines. The memorandum states that the existence of these agreements and their binding obligation upon the present management was admitted by Mr. Maher in testimony before the Commission in the recent controversy. In 1913, the men claiming that these agreements had in certain respects been violated, a strike took place in Yonkers, resulting in tying up the entire street car system for a period of 14 days. The Public Service Commission of the Second District having jurisdiction over these railway lines, in conference with both the president of the road, Mr. F. W. Whitridge, and the men, advised the latter to return to work immediately and urged the former to arbitrate all future differences that might arise. As a result of the efforts of the Commission, the following agreement was assented to:

1. The operation of the road shall be restored immediately under the employment conditions prevailing on December 31, 1912, with all men then employed restored to duty without prejudice to them.
2. That the company and the men shall consider all matters in difference, and that any matters upon which they shall be unable to agree shall be submitted to arbitration by arbitrators selected in the usual manner.
3. If any matters are claimed by either party not to be arbitrable, the question whether such matters are properly the subject of arbitration shall be arbitrated.

The statement prepared at the time by Chairman Stevens, containing the above agreement, also included the following paragraph:

> Mr. Whitridge clearly assented to the first and second propositions, but as to the third made the statement that some questions are not arbitrable. He finally said that he would abide by the decision of the chairman of the commission as to what questions are arbitrable, and after some further colloquy, stated that the position of the chairman that the question of what questions are arbitrable should be submitted to arbitration was correct. The commission understands, therefore, that Mr. Whitridge assents to the third proposition, which was read in his presence.[1]

Upon this record and agreement the men returned to work. That this agreement was applicable to the controversy arising between the men and the company because of the refusal of Mr. Whitridge to arbitrate was admitted by Mr. Maher, sr., in his testimony before the commission.

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[1] The memorandum of the Commission contains the following supplementary statement:

On August 9, 1916, Mr. Cook, counsel for the Third Avenue railway system, asked the Commission to add to the record the following telegram sent by Mr. Whitridge to Chairman Stevens on January 16, 1913:

"The Times and other papers this morning contain what purports to be a document signed by you and given to the men, but of which I have not received a copy, giving the gist of your conference yesterday. The last seven lines of that statement, beginning with the words 'and after some further colloquy,' are erroneous and contain a further expansion of what I said, to which I do not assent."

Mr. Stevens replied on January 17, 1913:

* * * "It is very much to be regretted that there is not a perfect agreement in recollection as to the conclusions reached. I apprehend, however, that it will occasion no trouble or embarrassment to anyone in the future, since there is but little if any possibility that it will ever become a practical question whether the statement is correct or not. * * *

"This telegram and correspondence show conclusively that the agreement to arbitrate was made and that Mr. Whitridge's only exception was to the complete accuracy of the record as compared with his recollection of the agreement to arbitrate, whether or not a question was arbitrable.

"In view of the fact that the only question involved in July, 1916, was one of *wages*—a clearly and concededly arbitrable matter—this question of Mr. Whitridge's recollection is academic. Any agreement to arbitrate contemplates that either party may raise the point that a matter is nonarbitrable, but it does not rest with either party arbitrarily to determine that a matter is nonarbitrable, and Mr. Whitridge's position was that he would not arbitrate the matter of increasing wages."

The hearings before the Commission seemed to result in narrowing down the Third Avenue controversy to these points: The company was fully prepared to recognize the legal and moral right of the men to organize and was ready, in broad terms, to pledge itself not to interfere with this right.

> We did not understand that the company would in any way interfere with the selection of the committee, nor would they interfere with the men securing advice from officers of the union, but we did think that probably the company would not wish to throw the weight of its indorsement to the organization, which it would do if it acquiesced in the men's request. The privilege to accord or withhold indorsement or sanction of the union was, of course, for the company to exercise. We did believe, however, that the public should not be deprived of its transit facilities because of a controversy over such a matter, nor that the business of a great city should be suspended while the parties wrangled over this point. In our opinion if the men won their first point, that is, that it was the duty of the company to arbitrate (for which they had contended), and their second point, the recognition of their right to organize and join a union, and obtained adequate pledges safeguarding them in this respect; we believed that they should not attempt further, by crippling the public utilities, to induce the company to give its indorsement to their organization. We were, and are still of the opinion that in this instance the rights of the public and of the State are paramount. We believed the company should be required to reduce to writing its pledge not to discharge any of the men for joining the union, nor to interfere coercively with their so joining, and we were prepared to require that, in order to avoid further misunderstandings, the arbitration agreement of 1913 should be made effective. We were hopeful of securing the acceptance of these views by both the men and the company. On the Yonkers and Westchester divisions, though the men admitted that they long ago had "secured recognition of the union," yet in the conferences and in the correspondence leading up to the present strike, when Mr. Whitridge objected to the designation of their committees as committees of their local union they promptly presented a modified letter with the designation omitted, thus showing breadth and wisdom in putting substance ahead of form. We believed, therefore, that we could reasonably hope to convince them that they could afford in this instance to show the same spirit and take the same stand. We were, moreover, clearly of the opinion that the arbitration agreement of 1913, binding the men as well as the company to submit such points of difference for arbitration, would send this matter to arbitration and thus remove it as a stumbling block. We believed that this point was an arbitrable one, in that it involved solely the company's attitude toward giving its weight of sanction or indorsement to the union, and since the company had a reasonable basis for arguing that to give this sanction would be doing more than giving the men a fair and free field to organize, it was subject to discussion and reason.
>
> If we secured a settlement on Monday with these lines in the Third Avenue situation—the "red car lines"—we were hopeful that it would furnish a *modus vivendi* for settling the New York railways situation—the "green car line." The "green car line" strike broke Saturday morning.

On Saturday, August 5, the foregoing considerations were formulated, and Mr. Cohen was authorized to present them on Monday morning to counsel for the Third Avenue system and the counsel for the men, and he was authorized further to endeavor to secure their assent and promise of recommendation of approval of their clients. On Saturday evening the mayor of the city of New York called upon the chairman of the Commission and sought his cooperation in an effort to avert further extension of the strike, the strike on the New York railways having been followed by that on the Queens railways, Second Avenue, and Staten Island lines. The chairman pledged his cooperation and outlined to the mayor the plans and program of the Commission. The mayor approved of both. On Sunday morning the mayor telephoned the chairman that he had arranged for a conference, first with the representatives of the union and then with the representatives of the New York Railways Co., to secure, if possible, an immediate settlement of the strike along the lines outlined by the chairman. The chairman and Mr. Cohen met the mayor and representatives of the men on Sunday, August 6, and laid before them five propositions which, after some discussion and slight modifications were finally agreed to and accepted by the representatives of the men.

In the afternoon these five propositions, together with the signed proposal of the men, were laid before the president of the New York Railways Co., and, with modifications in detail, accepted in the following form:

1. The employees have the legal and moral right to organize, and the company pledges that they will not interfere with the employees in their exercising of these rights to organize, either by intimidation, coercion or discharge, nor shall employees undertake to interfere with other employees in their exercising of their rights to decline to organize, either by intimidation or coercion.

2. The company will receive and treat with a committee of the employees upon any and all questions that may arise between them. This committee to select such spokesmen or advisers as they may choose to represent them, without any objection on the part of the company, and the company will in no way interfere with the selection of the committee of employees, it being understood that if the committee shall select to represent it the officers or other representatives of any particular organization, their appearance on behalf of the committee shall not be deemed to be a recognition on the part of the company of the organizations of which they are the officers or representatives.

3. That the question of wages and working conditions between the employees and the company shall be taken up by and through a committee of the employees with the officials of the company on a date to be agreed upon between them—such date not to be later than the 20th day of August, 1916.

The committee and the company in conference shall attempt to reach a satisfactory settlement upon all questions of wages and working conditions, and upon such points as they may fail to reach an agreement they shall submit to a board of arbitrators, the board of arbitrators to be composed of three disinterested persons, one to be selected by the officials of the company, one to be selected by the committee representing the employees, and these two arbitrators to select the third.

Both sides to be given full opportunity to present all evidence and argument in connection with their points submitted to arbitration, and the award of the majority of the arbitrators, in writing, shall be final and binding.

It is also agreed that all disputes that may arise between the company and the employees in the future, on which they can not mutually agree, shall be submitted to arbitration as herein provided.

4. In the interest of public safety and public service, the company wants it clearly understood that the direction and control of employees in all matters looking to efficiency in the service remains with the company and is not to be the subject of conference or arbitration, but if a dispute should arise as to whether a particular case falls within the above class, that question shall be subject to conference and arbitration as above provided for.

5. If the above is agreed to and accepted, it is further agreed that the employees shall declare off the strike and return to work immediately, in the positions they occupied prior to the time of going on strike, without prejudice.

This agreement to be underwritten by his Honor, Mayor Mitchel, and by the Hon. Oscar S. Straus, chairman of the Public Service Commission for the First District.

The representatives of the men being again sent for, the changes were submitted to them, and, after discussion, accepted by them. On Monday morning the men at their halls ratified the arrangement as to the railway lines. The directors of the Third Avenue Railway Co. met and authorized the consummation of the settlement. The board of directors of the New York Railways Co. also met on Monday and ratified and approved the action of their president.[1]

On the following morning, Tuesday the 8th, representatives of the Second Avenue Railroad Co., representatives of the Queens County road, and of the Staten Island companies, and representatives of the men, together with the mayor, the chairman of the Commission, one of the commissioners, and counsel for the Commission, met at the mayor's office, where all the representatives of the companies announced their willingness to settle their strikes upon the same terms as had been negotiated with the New York Railways Co. and the Third Avenue Railway Co. This settlement was consummated by acceptance and ratification of the men that afternoon.

The memorandum concludes:

Because of its supervision of the railroad facilities of the city, it was the special duty of this Commission to safeguard the lives of the citizens on its railroad lines and to ascertain whether the franchises of the companies were being exercised. Without knowledge of the facts the responsibilities for the situation could not be fixed. The Commission not only had power, but it was its duty to examine witnesses and ascertain the facts promptly. It was, in fact, the sole body having the powers of investigation. The Commission believes that the two days of investigation into the Third Avenue situation clarified the facts and fixed the responsibility.

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[1] The memorandum states that during the day the mayor and chairman of the Commission sought to persuade the directors of the company to ratify the act of their president and, in order to facilitate this result, the following statement was secured from the chairman of the employees' committee:

I have considered the two questions of interpretation of the terms of settlement contained in the letter of Theodore P. Shonts as president of the New York Railways Co., dated August 6, which you have presented to me, and on behalf of the men on strike I agree as follows:

The language in paragraph 1 as follows:

"Nor shall employees undertake to interfere with other employees in their exercising of their rights to decline to organize, either by intimidation or coercion"—

shall be held to mean in addition that this applies as well to members of the association whether they be employees of the New York Railways Co. or not.

The third paragraph on page 3 prescribing the method of selecting a board of arbitrators shall be amplified by the following provision:

In case the arbitrator selected by the officials of the company and the arbitrator selected by the committee representing the employees shall fail within ten days to select the third arbitrator, then such third arbitrator shall be selected by Hon. Oscar S. Straus.

While the settlement of the strike is important, the Commission believes that the lessons to be derived therefrom are more important and should be plainly set forth as a basis for further study and legislation. At this time it is not practicable to formulate definite measures to be introduced in the legislature, but, in order that there may be the widest possible criticism and opportunity for discussion, the Commission now presents for consideration certain deductions which it makes and certain questions which its experience suggests, as follows:

First. It is evident that the responsibility for maintaining service and adequate transit conditions requires that the Commission shall be clothed with the fullest powers. The public now believes that the Commission has such powers. This is not true, however, for the statutes contain careful limitations which have been further restricted by judicial decisions. If the Commission is to be an administrative body to regulate and control public services, its power shall be ample and undoubted.

In applying this concretely to industrial situations it is obvious that even if public opinion is the only power to control a given situation, such public opinion should be brought promptly to bear upon the basis of authentic knowledge of the facts and the just application of reason. If law and order are to be maintained in the community, correctly informed public opinion must be given an opportunity to assert its power.

Second. We are of opinion further, that if it had been known that the facts in the Yonkers and Westchester matter were subject to public investigations and inquiry by the Public Service Commission, the men would have been satisfied with the enforcement of the agreement to arbitrate and would have been satisfied with an order from the Commission directing the president of the railroad to proceed with the arbitration. We, therefore, suggest that when aggreements to arbitrate are made between public utility companies and their employees they should be recorded with the Public Service Commission, and if ratified and approved, made a part of the binding obligations of the company in the exercise of its franchise. This would permit the making of voluntary agreements between employees of the companies and the companies, with the knowledge on the part of both that there was power in the Commission to enforce the agreement. We are of opinion that the Public Service Commissions law should be amended to compel parties to such agreements to register them with the Commission, and in the event of a breach to permit either party to apply to the Commission for relief, and that the Commission should be vested with adequate power to grant relief in such cases.

Third. The recent experience of the Commission indicates clearly, as did the experiences in 1877 and in 1902, in the cases of the Boston & Maine Railroad strike and the anthracite coal strike, that *investigation and publicity* are more than half the cure for industrial differences.

Fourth. The rapid transit lines of the city are now or are about to be operated under the provisions of the contracts entered into between the Commission, as representative of the city, and the companies, whereby the city is in a position of ownership of the most of the lines and to a certain extent in partnership in the operation, thus creating a situation unlike any existing elsewhere, wherein there is a direct municipal, as well as public, interest in the continuous operation of the rapid transit systems of the city. This raises the question which is presented for consideration and public discussion as to whether the employees on such lines occupy a position toward the public and the municipality different from the position occupied by the employees of other public-service corporations.

Fifth. There is no doubt that men have the right to refrain from working, and any rule that requires a man to work against his will is in the nature of slavery. On the other hand, there are positions of public service that require the performance of instant duty; for example, the policeman or the fireman may not throw up his job while on duty, though he may resign his position.

It may very well be considered at this time whether or not the principle should be extended to the extent of saying that it is against the public interest that men employed on railroad or other public utilities may, without notice, exercise their right to quit their jobs in a group, thus crippling if not totally arresting the operations of public utilities, to the great damage of the public. We are not undertaking now to suggest what remedy, if any, may be just and practicable, but it is already the law that the matter of the operation of public utilities is a matter of State regulation. Is the quitting of the service a matter for State regulation?

These questions can not be settled without the broadest public discussion. They should be considered from every angle, with due consideration for the rights of the employees and the public.

We believe that the Commission should present these questions for consideration, so that when it resumes its hearings for the purpose of framing legislation it will have the benefit of receiving information, suggestions, and criticisms to aid in arriving at a final conclusion.

AGREEMENT BETWEEN THE BOSTON ELEVATED RAILWAY CO. AND ITS EMPLOYEES.

The articles of agreement between the Boston Elevated Railway Co. and the Amalgamated Association of Street and Electric Railway Employees of America and Division 589 thereof,[1] effective for three years from May 1, 1916, contain the following provision for arbitration:

> The company agrees to meet and treat with the duly accredited officers and committees of the association upon all questions arising between them, and should any difference arise between them which can not be mutually adjusted, the same shall be submitted, at the request of either party, to a board of arbitration to be selected in the following manner:
>
> One arbitrator shall be chosen by the company, one by the association, the two arbitrators so chosen shall meet daily to select a third, and the three arbitrators so chosen shall then endeavor to meet daily for the purpose of adjusting said difference, and the decision of the majority of said board, submitted in writing to the company and the association, shall be binding upon both parties.
>
> In the event of the failure of either party to appoint its arbitrator within six (6) days after arbitration is decided upon, the party so failing shall forfeit its case. Each party shall bear the expense of its own arbitrator and the expense of the third arbitrator shall be borne equally by the parties hereto.

The following are the more important articles of agreement: Provision is made for the adjustment of grievances; employees are not to be discriminated against because of membership in the association; at least 1 day off in 15 shall be granted upon request; schedule runs shall provide between 8 and 9½ hours platform work, and at least 70 per cent of all such runs shall be laid out with outside time not to exceed 11 hours, and in no case is a schedule run to have outside time in excess of 14 hours; payment for platform time in excess of 9 hours shall be at the regular hourly rate (with certain exceptions); all employees are guaranteed not less than 6½ hours pay provided they remain on duty as long as required, not to exceed 14 hours.

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[1] Articles of agreement. Boston Elevated Railway Co. and Amalgamated Association of Street & Electric Railway Employees of America and Division 589 thereof. May 1, 1916, to Apr. 30, 1919. Boston [1916]. 99 pp.

Under the agreement hourly wages of motormen and conductors on the surface lines, and of motormen, guards, brakemen, and gatemen on the rapid transit lines, for each year of service, compared with the wages in force prior to May 1, 1916, are shown in the following table:

HOURLY WAGES[1] OF MOTORMEN AND CONDUCTORS ON THE SURFACE LINES, AND OF MOTORMEN, GUARDS, BRAKEMEN, AND GATEMEN ON THE RAPID TRANSIT LINES OF BOSTON UNDER THE AGREEMENT, COMPARED WITH WAGES IN EFFECT PRIOR TO MAY 1, 1916, FOR EACH YEAR OF SERVICE.

Year of service.	Rate prior to May 1, 1916 (cents).	Rate from May 1, 1916, to May 1, 1917 (cents).	Rate from May 1, 1917, to May 1, 1918 (cents).	Rate from May 1, 1918, to May 1, 1919 (cents).	Rate prior to May 1, 1916 (cents).	Rate from May 1, 1916, to May 1, 1917 (cents).	Rate from May 1, 1917, to May 1, 1918 (cents).	Rate from May 1, 1918, to May 1 1919 (cents).
	Motormen and conductors—Surface lines.				*Motormen—Rapid-transit lines.*			
First 6 months	26.75	28.75	29.50	30.25	......	......	......	......
Second 6 months	27.00	29.00	29.75	30.50	[2] 30.25	[2] 32.25	[2] 33.00	[2] 33.75
Second year	28.25	30.25	31.00	31.75	31.00	33.00	33.75	34.50
Third year	29.00	31.00	31.75	32.50	31.75	33.75	34.50	35.25
Fourth year	29.50	31.50	32.25	33.00	32.50	34.50	35.25	36.00
Fifth year	30.50	32.50	33.25	34.00	33.25	35.25	36.00	36.75
Sixth year and thereafter	32.00	34.00	34.75	35 50	34.00	36.00	36.75	37.50
	Guards—Rapid-transit lines.				*Brakemen—Rapid-transit lines.*			
First year	25.50	27.50	28.25	29.00	22.00	24.00	24.75	25.50
Second year	26.50	28.50	29.25	30.00	22.50	24.50	25.25	26.00
Third year	27.00	29.00	29.75	30.50	23.25	25.25	26.00	26.75
Fourth year	27.50	29.50	30.25	31.00	23.75	25.75	26.50	27.25
Fifth year	28.00	30.00	30.75	31.50	24.25	26.25	27.00	27.75
Sixth year and thereafter	28.50	30.50	31.25	32.00	24.75	26.75	27.50	28.25
	Gatemen—Rapid-transit lines.							
First year	18.50	20.50	21.25	22.00				
Second year	19.50	21.50	22.25	23.00				
Third year	20.00	22.00	22.75	23.50				
Fourth year	20.25	22.25	23.00	23.75				
Fifth year	20.50	22.50	23.25	24.00				
Sixth year and thereafter	21.00	23.00	23.75	24.50				

[1] Lay-offs not exceeding 30 minutes are to be paid for at regular rates.
[2] This rate applies to the first year.

CONCILIATION AND ARBITRATION IN MASSACHUSETTS.

As amended in 1914 the Massachusetts act providing for a State board of arbitration for the settlement of differences between employers and employees, requires that notice of a threatened strike or lockout be given to the State board in order that it may communicate with the parties to the controversy and endeavor by mediation to obtain an amicable settlement or to persuade them to submit the matter to arbitration. These efforts failing, the board is required to serve notice on the parties that it will investigate the cause of the controversy to ascertain which side is mainly responsible or blameworthy for its existence or continuance. This investigation is public and, unless a settlement is reached, the decision of the board is published, usually with a recommendation as to what ought to be done to adjust the controversy. The board insists, pursuant to law, that the parties shall either settle the matter between themselves or agree to submit the whole question to arbitration by the State board or by a board selected by themselves.

Operating under the law thus briefly outlined, the State board of conciliation and arbitration, according to the recently issued thirtieth annual report for the year ending December 31, 1915,[1] considered 209 cases of industrial disputes. Of this number 86 were voluntarily submitted to the board to be determined by arbitration; 100 cases were amicably adjusted as a result of the board's conciliation; in 18 cases, conciliation failing to bring about a good understanding, and the parties refusing to join in a submission of the questions in dispute to arbitration, public investigations were held. At the conclusion of these hearings the board's recommendations were adopted by the parties in all except 5 cases. There were 5 petitions presented for the board to determine whether the business of the petitioner was being carried on in a normal and usual manner and to the normal and usual extent. The treatment and disposal of the cases in 1915 cost $10,985.55, an average cost per case of $52.56. The sum appropriated for the board's use to cover this expense was $15,000.

The report notes that while the number of requests for changes in working conditions, wages, and hours of labor continued undiminished there has been a decrease in the number of strikes since 1913. This, it is stated, is largely due to the policy of conducting the investigation already referred to and to the increasing tendency of employers and organized employees to accept the advice of the board and utilize the methods provided by statute in the settlement of industrial disputes.

An important feature in labor controversies is the trade agreement, and it is stated that the board has prevented many industrial difficulties by drafting or correcting the draft of such contracts which contain provisions that negotiations and arbitration shall remedy the difficulties that may arise thereafter. On this point the report says:

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[1] Massachusetts. Thirtieth Annual Report of the State Board of Conciliation and Arbitration for the year ending Dec. 31, 1915. Boston, 1916. 245 pp.

> The trade agreement can not be too highly praised, but to eulogize it at the expense of arbitration is to misstate its merits and to render it short lived or void, since it is the arbitration clause that makes the contract a trade agreement. There are hundreds of such agreements in this State, the majority of which exist in the shoe industry. The trade agreement grew out of conciliation cases, it being found that the effort to compose a past difficulty would, with proper regard to the future, suffice to prevent its recurrence. It differs from an agreement, which merely terminates a strike by providing overtures, conferences, negotiations, and mutual adjustment of future differences, and, in default of these, submission of such controversies to the judgment of an impartial tribunal. The law gives the parties choice between the State board and a local board, of which they select the members. Resorting to arbitration supposes a disposition to peace, and requires a certain degree of harmony at the outset; it often happens that the parties settle their controversy with little or no assistance while attempting to frame the joint submission of the case. The prevention of labor trouble, the reconciling of adversaries, and the adjustment of friendly disputes are connected so closely and resolve so freely into one another as to be inseparable in any practicable design of substituting peace for industrial strife.

It appears that from 20 to 40 cases of arbitration in various stages of procedure are constantly before the board, such cases being brought by parties already disposed to peace and in agreement as to the best method of securing it.

As illustrating the work of the board in settling controversies, one case may be cited. There was a strike in the works of the United States Cartridge Co. at Lowell. The parties could not be brought into agreement on prices, nor could a joint application for arbitration be secured. The employer requested the board's opinion of fair wages for the 347 kinds of performances required of the work people. The employees returned to work pending the board's recommendation. The board investigated and recommended a wage scale, given in full in the report, to be paid various grades of work people, and an increase of 7 per cent in the pay of machinists. Both parties accepted the board's advices concerning what they ought to do and submit to in order to adjust the controversy, and these recommendations had the same effect as an award rendered on a joint application.

More than 200 pages of the report are devoted to a history of 158 cases adjusted through the efforts of the board.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Figures compiled by the Bureau of Labor Statistics from reports furnished by approximately 725 retail dealers in 44 of the principal industrial cities of the United States show an increase of 2 per cent from May 15 to June 15, 1916, in the combined price of 26 of the principal articles of food.

Butter, flour, cheese, and milk showed a decrease in price from May 15 to June 15, although the decline in the price of milk was but a fraction of 1 per cent. Canned salmon, rice, tea, and coffee showed no change. All other articles increased in price, from raisins and prunes, a fraction of 1 per cent, to potatoes, 19 per cent.

The table which follows shows the relative retail prices on May 15 and June 15, 1916, of 26 of the articles covered by the bureau's reports, together with the average money prices on the same dates. In computing the relative price terminal decimals are dropped, but as the use of round numbers fails to reflect slight changes in price, it has been deemed advisable to use plus and minus signs to indicate more exactly the relative price. Thus, the relative 112+ for sirloin steak in June denotes that the relative price computed closely is more than 112 but less than 112.5. The relative price 112− for rib roast in June indicates that the exact relative price is at least 111.5 or above, but is still under an exact 112. When no plus or minus sign is used the relative price is exact. The average money price is shown only to three places, and the plus and minus signs are used in the same way as they are used in connection with the relatives. Were the decimal extended further, it would explain the few instances of apparent inconsistencies between the average money price and the relative price.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MAY 15 AND JUNE 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price.		Relative price (average price for the year 1915=100).	
		May 15, 1916.	June 15, 1916.	May 15, 1916.	June 15, 1916.
Sirloin steak	Pound	$0.276−	$0.286−	108+	112+
Round steak	do	.248+	.257+	109−	113+
Rib roast	do	.216	.224	108+	112−
Chuck roast	do	.174−	.180+	108−	112−
Plate boiling beef	do	.130+	.134−	107+	110−
Pork chops	do	.230−	.232−	113+	114+
Bacon, smoked	do	.290−	.292+	106−	107
Ham, smoked	do	.289+	.292−	112+	113+
Lard, pure	do	.169−	.172−	114−	116
Hens	do	.241+	.244−	116+	117−
Salmon, canned	do	.202	.202	101−	101−
Eggs, strictly fresh	Dozen	.278+	.295−	83−	88
Butter, creamery	Pound	.375−	.367+	104−	102−
Cheese	do	.247+	.245−	107−	106−
Milk, fresh	Quart	.090	.090	100+	100
Flour, wheat	⅛-barrel bag	.953+	.933+	95−	193+
Corn meal	Pound	.031−	.031+	99+	100−
Rice	do	.091−	.091−	100+	100+
Potatoes	Peck	.360−	.429−	157+	187
Onions	Pound	.051−	.054+	147+	157−
Beans, navy	do	.093+	.096−	121−	124
Prunes	do	.130+	.130+	98−	98+
Raisins, seeded	do	.127−	.127−	101	101+
Sugar, granulated	do	.086−	.087+	130−	132−
Coffee	do	.302−	.302−	100−	100−
Tea	do	.551+	.551+	100+	100+
All articles combined				107+	109+

The following table shows the average money prices and the relative prices of the same 26 articles on June 15 of each year from 1912 to 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON JUNE 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of June in each year was of the average price of the year 1915.]

Article.	Unit.	Average money price June 15—					Relative price June 15 (average for the year 1915=100)—				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.237+	$0.258–	$0.260+	$0.260+	$0.286–	93+	101–	102+	102–	112+
Round steak	do	.205–	.223–	.234+	.232+	.257+	90+	98+	103+	102	113+
Rib roast	do	.194	.200	.204	.202	.224	97+	100+	102–	101+	112–
Chuck roast	do			.171–	.164+	.180+			106–	102–	112–
Plate boiling beef	do			.125+	.123–	.134+			103–	101–	110–
Pork chops	do	.191+	.209+	.218–	.207+	.232–	94–	103–	107–	102	114+
Bacon, smoked	do	.246–	.276–	.273+	.273+	.292+	90–	101+	100+	100–	107
Ham, smoked	do	.243–	.271+	.266–	.258+	.292–	94–	105–	103+	100–	113+
Lard, pure	do	.148–	.158+	.154–	.151–	.172–	100+	107	104+	102+	116
Hens	do	.200–	.219–	.221–	.210+	.244–	96–	105+	106–	101+	117–
Salmon, canned	do				.200	.202				100–	101–
Eggs, strictly fresh	Dozen	.261+	.275–	.278+	.265–	.295–	78–	82–	83–	79–	88
Butter, creamery	Pound	.339–	.353–	.339–	.349+	.367+	94+	98+	94–	97–	102–
Cheese	do				.233+	.245–				101–	106–
Milk, fresh	Quart	.087+	.090	.090	.089+	.090	97–	100–	100+	99+	100
Flour, wheat	⅛ bbl. bag	.873–	.803–	.793–	1.033+	.933+	87+	80+	79–	103+	93+
Corn meal	Pound	.030+	.028+	.030–	.031+	.031+	96–	91–	95+	100+	100–
Rice	do				.091–	.091–				100+	100+
Potatoes	Peck	.438–	.268+	.339+	.254+	.429–	191–	117–	148+	111–	187
Onions	Pound				.040–	.054+				116	157–
Beans, navy	do				.076–	.096–				98–	124
Prunes	do				.133–	.130+				100+	98+
Raisins, seeded	do				.126–	.127–				100–	101+
Sugar, granulated	do	.063+	.053+	.051+	.069+	.087+	96–	81–	78–	105+	132–
Coffee	do				.302–	.302–				100+	100–
Tea	do				.551+	.551+				100–	100+
All articles combined							96–	96+	98+	98	109+

A comparison of prices on June 15 from year to year shows an increase in the price of all food combined of 14 per cent from June 15, 1912, to June 15, 1916. There was approximately no change from June 15, 1912, to June 15, 1913; 2 per cent from June 15, 1913, to June 15, 1914; no change from June 15, 1914, to June 15, 1915; and a jump of 11 per cent from June 15, 1915, to June 15, 1916.

Potatoes declined 2 per cent from June 15, 1912, to June 15, 1916, being the only article which was not higher on June 15, 1916, than on the same date five years earlier. Flour, corn meal, prunes, and coffee, were the only articles lower in price on June 15, 1916, than on the same date one year earlier, although corn meal and coffee were but slightly lower.

Meats advanced in the year from June 15, 1915, to June 15, 1916, from 7 per cent for bacon to 16 per cent for hens. Other articles which made marked advances during this period were beans, 27 per cent; sugar, 26 per cent; onions, 35 per cent, and potatoes, 68 per cent.

RETAIL PRICES OF COAL, 1907 TO 1916.

Reports as to retail coal prices received by the Bureau of Labor Statistics from approximately 250 coal dealers in the same 44 cities from which reports are received as to retail prices of food, show an increase of 3 per cent in the price of Pennsylvania anthracite white ash stove coal from January 15 to July 15, 1916, an unusual condition, as summer prices are ordinarily lower than winter prices. From January 15, 1915, to January 15, 1916, there was an advance of 2 per cent, while from July 15, 1915, to July 15, 1916, there was an advance of 8 per cent. The changes in prices of chestnut coal were about the same.

In bituminous coal the changes were not so marked. There was a decline of 1 per cent in the price from January 15, 1916, to July 15, 1916, but an advance of 3 per cent on July 15, 1916, over the same date of the previous year.

The table given herewith shows the relative retail prices of Pennsylvania anthracite stove and chestnut coal and of bituminous coal for the years 1907 to 1916, inclusive, and for January 15 and July 15 of each year during this period. The yearly relative prices in the first section of the table are averages of the January and July prices of each respective year.

RELATIVE RETAIL PRICES OF COAL EACH YEAR, 1907 TO 1916, INCLUSIVE, AND ON JAN. 15 AND JULY 15, OF EACH YEAR OF THE SAME PERIOD.

[Average price for 1915=100.]

Year.	Pennsylvania white ash, stove.	Pennsylvania white ash, chestnut.	Bituminous.	Month and year.	Pennsylvania white ash, stove.	Pennsylvania white ash, chestnut.	Bituminous.	Month and year.	Pennsylvania white ash, stove.	Pennsylvania white ash, chestnut.	Bituminous.
1907	93	91	101	January, 1907.	94	92	102	July, 1907	91	89	99
1908	93	92	100	January, 1908.	95	94	103	July, 1908	91	90	97
1909	93	92	97	January, 1909.	95	94	99	July, 1909	90	89	94
1910	93	92	98	January, 1910.	95	94	100	July, 1910	91	90	96
1911	94	93	100	January, 1911.	95	94	103	July, 1911	92	92	96
1912	96	96	99	January, 1912.	96	96	100	July, 1912	96	96	98
1913	101	100	103	January, 1913.	104	103	105	July, 1913	97	97	100
1914	99	99	103	January, 1914.	100	100	106	July, 1914	98	98	100
1915	100	100	100	January, 1915.	101	101	102	July, 1915	98	98	97
1916	104	104	101	January, 1916.	103	103	101	July, 1916	106	105	100

WHOLESALE PRICES IN 1915.

Wholesale prices of commodities in the United States averaged considerably higher in 1915 than in the preceding year, according to Bulletin 200 of the Bureau of Labor Statistics of the United States Department of Labor. The downward trend which set in toward the close of 1914 did not extend beyond that year and by the end of January, 1915, prices of many commodities had advanced to a point well above those of the year before. February prices in the aggregate were above those of January, but slight decreases occurred in March and April. In May prices again advanced and, except for small declines in June and September, continued at high levels throughout the remainder of the year. The bureau's weighted index number for December was 105, the highest point reached in any year since the collection of data for the present series of reports on wholesale prices, dating back to 1890, was begun.

Violent fluctuations were recorded during 1915 in the prices of many commodities, particularly drugs and chemicals, and metals and metal products. In the former group, prices as a whole declined during the first five months of the year, after which they rose sharply until the December average was 39 per cent above the average for January and 43 per cent above that for May. Metals and metal products advanced steadily in price throughout the year, except for slight declines in August, September, and October. The year closed with prices in this group 37 per cent above the January prices.

In the fuel and lighting group there was little change in prices during the first three months of the year, but marked declines took place in the spring and early summer. In August prices again advanced, the increase continuing for the rest of the year. The December average for this group was 11 per cent above that for January. Prices in the cloths and clothing group showed a steady advance during the entire year, the increase from January to December being more than 11 per cent.

Articles belonging to the food group were, in the aggregate, highest in price in December and lowest in September. The increase between January and December in this group was nearly 4 per cent. Farm products averaged highest in May and lowest in January, September, and November. The average for December was only slightly above that for January. In the remaining groups prices as a whole showed a falling tendency during the earlier part and a rising tendency during the latter part of 1915.

Comparing 1915 with 1914, the group of commodities showing the greatest increase in average yearly prices was that of metals and metal products, the increase in the group as a whole being slightly more than 11 per cent. In the drugs and chemicals group the increase between the two years was nearly 10 per cent. The group of farm products showed a 2 per cent increase in the average for 1915 over that for 1914, while the food group and the cloths and clothing group each showed an increase of 1 per cent. Of three groups showing a decrease in average yearly prices in 1915, as compared with 1914, fuel and lighting decreased nearly 6 per cent, lumber and building materials nearly 4 per cent, and house-furnishing goods nearly 1 per cent.

Of the 346 commodities or grades of commodities for which the bureau collected wholesale prices for 1914 and 1915, 174 showed an increase between these two years, 135 showed a decrease, while no change was reported in the case of 37 commodities. A majority of the 174 commodities which increased in price between 1914 and 1915 belongs to the farm products, cloths and clothing, and metals and metal-products groups. Within these three groups, comprising 150 series of price quotations, 93 commodities or grades of commodities increased in price, 44 decreased, and 13 were unchanged. Articles showing an increase of more than 20 per cent were native steer hides, rye, wheat, medium fleece wool, 2–32s worsted yarn, ingot copper, copper wire, quicksilver, sheet zinc, and spelter. Some of the articles in these three groups which decreased in price were hogs, hops, cotton, cotton bags, cotton blankets, cotton flannels, and raw silk.

In each of the three groups, food, fuel and lighting, and lumber and building materials, more than half of the commodities decreased in price from 1914 to 1915. In most instances, however, the decreases were small, while increases of more than 20 per cent were recorded for beans, rye flour, wheat flour, oranges, raw sugar, and zinc oxide. Articles showing decided decreases in price were fresh and evaporated apples, lemons, raisins, salt pork, cabbage, onions, potatoes, and crude petroleum.

Of 10 commodities classed as drugs or chemicals, all but crude sulphur increased in price in 1915, as compared with 1914. The most decided increases were for alum (50.5 per cent), borax (24.5 per cent), glycerin (37.8 per cent), muriatic acid (23.8 per cent), quinine (20.5 per cent), and sulphuric acid (29 per cent).

LABOR CONDITIONS IN HAWAII.

The fifth report of the Commissioner of Labor Statistics on labor conditions in the Territory of Hawaii, which has been published as Senate Document 432,[1] presents statistical details, as required by law, showing the highest, lowest, and average number of employees engaged in the various industries in the Territory, classified as to nativity, sex, hours of labor, and conditions of employment. A large oriental population and a tropical climate make labor conditions in Hawaii different from those on the mainland of the United States. The average earnings and the standard of living of common laborers are higher, although wages are lower and the opportunity to advance is less than among such workers in California. At the time the report was prepared skilled American and part-Hawaiian mechanics in Honolulu were earning from $3 to $5 a day and unskilled laborers and helpers $1.50 to $2 a day. The general condition of Hawaiian workers appears to present no evidence of economic hardship, although individual instances of such hardship doubtless occur.

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[1] Labor conditions in Hawaii. Letter from the Secretary of Labor transmitting the fifth report of the Commissioner of Labor Statistics on labor conditions in the Territory of Hawaii for the year 1915. S. Doc. 432, 64th Cong., 1st Sess. Washington, 1916. 192 pp. Illustrated.

The chief industries of Hawaii are sugar production and pineapple growing and canning. Sugar forms about nine-tenths in value of agricultural products and more than four-fifths of the entire population is upon plantation pay rolls. The industry is highly centralized and capitalized, and its growth, from a crop yield of 360,038 tons in 1901 to 646,445 tons in 1915, has been accomplished by bringing more land into cultivation, mostly through great irrigation works, and by increasing the return of cane per acre and the amount of sugar made from a ton of cane through scientific cultivation, cane selection and breeding, pest control, and fertilization, and through improved construction and practice in mill and boiling house.

There are 47 corporations in Hawaii exclusively or largely engaged in producing sugar, of which 43 operate mills. With one exception, all are owned or controlled by Americans or Europeans. All but three of the incorporated sugar plantations belong to the Hawaiian Sugar Planters' Association, which maintains a regular force of labor recruiters in the Philippines and has a local transportation service in those islands for supplying hands to Hawaiian plantations. It prescribes schedules of wages to be paid to ordinary field hands by plantations receiving labor from this source. It also has established and supervises a system of bonuses for plantation laborers, to be noted later.

Most of the laborers employed in sugar production are Orientals—36,378 (81 per cent) Chinese, Koreans, Japanese, and Filipinos being employed in 1915 on plantations of the Hawaiian Sugar Planters' Association. Of the 44,904 employed, 24,046 (53.5 per cent) were Japanese, this being a decrease of 24.32 per cent in the number of Japanese employed in 1908, when the largest number of this race (31,774, or 69.7 per cent of the total employees) was employed. Their places have been taken largely by Filipinos, of whom 183 were employed in 1908 and 8,695 in 1915. European laborers represented 11.5 per cent, Hawaiians 2.2 per cent, Americans 1.4 per cent, and all others 3.9 per cent. Most of the skilled employees—that is, those receiving $50 or more a month, exclusive of earnings of contractors and of persons receiving in excess of this sum on account of overtime—are Americans, representing 34.15 per cent of the 1,696 so classified in 1915.

Many field and some manufacturing operations are paid for at a specific rate per unit of work. Cane cutting and loading are examples. Other forms of plantation work are carried on under what are locally termed "short-time contracts," which are in fact employment at piecework rates. A very common and important true contract is the long-term cultivating contract or "profit sharing" agreement, where a gang of men takes a field of cane and brings it to maturity for a stated price per ton of cane raised. In addition to the contracts mentioned, a man may rent a piece of land from a plantation, or use his own land, to raise a crop of cane which he contracts to sell to the mill at a stated price. He is called a "planter." The importance of small farming carried on by these "profit sharers" and "planters" is brought out in a section describing the manner in which their crops are disposed of to the plantations, the method of arriving at the amount to be paid for the product in the case of "planters," and the elements entering into the cost of raising and milling cane. One plantation buys practically all its cane from renters at a flat rate of $3.25 a ton, and another sugar agency, representing five plantations, during the five years ending with 1915, bought 1,030,888 tons of cane from outside growers for which it paid an average of about $4.05 a ton delivered.

Of 43,208 unskilled laborers in 1915, the number of wage hands was 24,468 (56.63 per cent), contractors 15,121 (35 per cent), and planters 3,619 (8.38 per cent). The proportion of Koreans who work by contract is larger than that of any other nationality, and a table is given showing that of about 21,000 Japanese engaged in cane raising directly for the plantations nearly 10,000 are contractors.

Omitting women and children, the lowest rate paid common field hands is $20 a month. On many plantations the base rate is $24 a month for all Europeans, and over $20 for Orientals. Many workers receive more than one rate during a single month, since they change their occupations frequently. Contractors usually earn more than daymen but their income is more variable. Their earnings bear no relation to the price of sugar as do those of many "planters," but in case of "profit sharers" they do depend upon the yield of cane. The following table shows the average rates of pay of common laborers and the average and per cent of increase in daily earings of men employed in profit-sharing contracts for those years for which statistics have been gathered by the Bureau of Labor Statistics since 1902:

NUMBER AND AVERAGE DAILY EARNINGS OF ADULT MALE FIELD EMPLOYEES, 1902, 1905, 1910, AND 1915, AND PER CENT OF INCREASE IN EARNINGS.

Field employees.	1902		1905			1910			1915		
	Number.	Average daily wage.	Number.	Average daily wage.	Per cent of decrease since 1902.	Number.	Average daily wage.	Per cent of increase since 1905.	Number.	Average daily wage.	Per cent of increase since 1910.
Field hands	15,307	$0.68	17,749	$0.65	4.4	12,769	$0.73	12.3	[1] 10,899	$0.81	11.0
Contract cultivators [2]	9,286	.99	3,437	.83	16.2	6,867	.91	9.6	[3] 6,885	1.23	35.2
All field labor [4]	24,593	.80	21,186	.68	15.0	19,636	.79	16.2	[5] 17,784	.97	22.8

[1] Not including 150 field hands, whose sex is not reported.
[2] Includes those only whose average daily earnings were reported.
[3] Not including 232 contract cultivators whose sex is not reported.
[4] Includes those day hands and contract cultivators only whose daily earnings were reported.
[5] Not including 382 field laborers whose sex is not reported.

An important feature of the wage scale is the system of bonuses introduced several years ago by the Planters' Association. Under this bonus plan, before it was amended as noted hereafter, employees receiving $24 or less a month (on some plantations all employees receiving less than $50 a month were allowed to participate), providing they had worked upon an average 20 days each month for the plantation during the preceding year, were allowed as a share of the plantation profits at the close of the season a sum representing a percentage of their earnings, this percentage to be determined by the amount above a certain minimum per pound the plantation received for sugar sold that year. With the price of sugar not exceeding 3.5 cents a pound in New York, that is, $70 a ton, no bonus was paid. For every $1 a ton that the average price for the year rose above $70, a bonus of 1 per cent of their annual earnings was paid to laborers who had worked the required 240 days during the year for the same plantation. If a laborer did not work the full 240 days on account of physical disability or because excused from work by the manager or discharged without his own fault, he received a bonus upon the amount he earned during the time he did work. If a laborer had worked 240 days on the same plantation, part of the time as a day hand and part of the time as a contractor, he was allowed a bonus on the amount earned as a day hand only. This plan included only wage hands. The bonus was paid on the regular pay day in November or December for the year ending October 31. In 1915 the average price of sugar was nearly $90 a ton, and the bonus paid to laborers equaled 20 per cent of their annual earnings. In 1914, the last year for which figures are available, the bonus was 5 per cent and the amount distributed to 15,985 workers was $189,025 or an average of $11.83 each.

Inquiry made by the Commissioner of Labor Statistics since the study for the report was made has brought out the fact that on April 1, 1916, the bonus rate was increased to 1.5 per cent of the laborer's earnings for every $1 that the price of sugar rises above $70 a ton and that the bonus is now paid to all contract cultivators or profit sharers and to all short-time contractors, as well as to wage hands. It does not apply to contractors whose contracts are settled according to the price of sugar. The requirement that the worker must remain on the plantation a year to obtain the bonus has been abolished, and instead all male workers laboring 20 days in a month are entitled to the bonus for that month. One-fifth of the bonus is paid at each monthly pay day, and the remaining four-fifths is payable at the end of the bonus period, October 31. It appears from the correspondence that a number of planters are paying the bonus to all employees earning $50 or less a month. This new system seems to have had the effect of increasing wages in other lines, pineapple plantation laborers and domestic servants now demanding and receiving higher pay.[1]

When the bonus system was introduced it became necessary to keep a complete record of the days worked and the monthly earnings of each individual employed as a basis for the computations it required. Before this, plantation timekeepers, who sometimes have 3,000 employees on their pay rolls and seldom list laborers by name, but by numbers, kept no record of cases where the same number was assigned to different individuals in the course of the year. Therefore, it was impossible to determine the earnings of particular persons with certainty. With the new data afforded by the bonus accounts, and through the courtesy of managers and bookkeepers, who undertook much additional work for this purpose, statistics of the annual earnings of their employees have been compiled by several plantations. These indicate average yearly earnings by nationalities as follows:

NUMBER AND AVERAGE YEARLY EARNINGS OF ADULT MALE SUGAR PLANTATION AND MILL WORKERS, CLASSIFIED BY NATIONALITY.

Nationality.	Employees.	Average yearly earnings.
American	14	$833.18
Chinese	180	321.23
Filipino	1,037	200.33
German	4	561.41
Hawaiian	254	382.23
Japanese	3,079	323.69
Korean	49	284.32
Porto Rican	183	268.31
Portuguese	1,123	350.77
Russian	20	368.07
Spanish	507	264.54
Total	6,450	305.18

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[1] The Hawaiian Star-Bulletin of July 4, 1916, contains the announcement that day labor has gone up from $1.25 to $1.50, that yard boys who used to get $4 to $5 a week are now asking and getting $7 to $8 a week, that women who used to ask $3 or $3.50 a week for domestic work can not be coaxed with offers of $6 and $7 a week now. This, it is stated, is the result of the new scale of wages put into effect this spring, and of the activities of the pineapple canneries.

Considering the demands of climate plantation workers are better housed than many railroad laborers, mine workers, and unskilled city workmen on the mainland. It is necessary to guard against deterioration of quarters when laborers from the Orient, with low standards of living and primitive notions of hygiene, are introduced. Many plantations employ sanitary inspectors whose duty it is to inspect at short intervals all laborers' quarters and to enforce proper cleanliness. All large plantations provide hospital and medical attendance, which is rendered free to most workers receiving low rates of pay; in some places 10 cents a month is deducted from the wages.

Plantation workers receive, in addition to wages, free house, fuel, and water, and in many cases land upon which to raise vegetables is furnished free of rental. Living expenses are thus somewhat reduced. It was found that a Japanese single man pays about $7 a month for board, that a small family spends about $10 a month for provisions, and that European laborers feel the increased cost of food more than Asiatics.

The provisions of the workmen's compensation law, enacted in 1915, cover agricultural laborers. This law provides for surgical, medical, and hospital service for the first 14 days, not exceeding $50 in amount, but allows no compensation for the first 14 days of disability. Sixty per cent of the wages may be paid during temporary total disability. It seems to have been the custom of plantations and of some other large employers, to pay full medical expenses and wages in such cases. In case of death or permanent disability the law defines the rights of workers and gives them and their families better assurance of uniform compensation than under the old system. The act also protects many employees of small enterprises who hitherto have had imperfect remedies for disablement in the pursuit of their calling. No provision is made for compensating employees whose wages exceed $36 a week. Plantations and canneries, which are the largest employers, carry their own insurance.

Since the preparation of the report some inquiry has been instituted to ascertain the effect of the compensation act. The replies seem to indicate in general that the act has worked out satisfactorily and that employers feel that it is on the whole a good law. An effort will probably be made at the next legislature to shorten the period of nonpayment, increase the hospital and medical treatment allowance, and also increase the per cent of wages to be paid in case of permanent, partial, or total disability. The compensation provided under the present law is not as liberal as that given by the sugar plantations under the old system of voluntary compensation. Most plantations have continued the old method of compensating for every day lost and of paying indemnity for permanent injuries. such as the loss of a finger.

Next in importance to the sugar industry is the pineapple industry. In 1915 12 canneries were in operation. Pineapple canning is seasonal, the main crop coming in July and August. Most of the labor is recruited from casual workers and none is brought from abroad. Somewhat higher wages are paid in this industry than on the sugar plantations, the average daily wage for adults, all nationalities, being 97 cents for field labor and 94 cents for cannery labor. Here also the Japanese predominate, furnishing 45.64 per cent of the employees in the field and 36.07 per cent in the canneries.

As already indicated, most of the labor performed in Hawaii is done by Asiatics, 81 per cent of all employees in 1915 being Orientals. The increasing numbers and influence of the Japanese are indicated by the facts that the amount of real estate upon which they pay taxes rose in assessed value in 10 years from $168,545 to $1,002,203, and that of 36,529 pupils of all nationalities in the public and private schools, 13,553 (37.1 per cent) were Japanese.

> The political influence of these people, whose Americanization is still in question, will be reenforced by their growing economic influence. The Japanese have continuously for many years extended their business activities, beginning with small enterprises, until they are well intrenched in many lines of commerce and manufacturing. They control the local fisheries, and their vessels conduct our trade with the Orient and South America. No legal barriers stand in the way to prevent their eventually acquiring a large influence in the sugar and pineapple industries, in both of which they already have made a beginning. Japanese born in Hawaii, but, in many cases, reared and educated entirely in Japan, are acquiring homesteads. As lessees of small holdings they are rapidly forming the beginnings of a local peasantry. So far as future results are predictable from present tendencies, the Japanese bid fair to become owners of a large fraction of the arable land in the islands not directly cultivated by corporations.

In summing up labor conditions in the islands, the report says:

> Labor conditions in Hawaii are better than in most tropical countries and in some ways they are better than in many mainland communities. The struggle for existence is not severe. * * *
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> Most of the betterment of labor conditions during the past 15 years has not been at the instance of the laborers themselves. It has been partly forced from employers by their competition among themselves for labor. No organized demand throughout the islands has been made by laborers for higher wages, shorter hours, or other concessions. * * * The improvements in housing and camp sanitation, the gradual betterment of medical service, and the financial support given to welfare work among plantation laborers have been unsolicited by the laborers. * * *
>
> The plantation interests form a benevolent industrial oligarchy. The relations existing between the plantation manager and his laborers are semifeudal. * * * As sugar is the dominant economic interest of the islands, it is consequently the dominant political interest. The territorial government, controlled in large part by the sugar interests, seems to an outside observer to compare favorably with the State governments of continental United States in point of honesty, intelligence, and progressiveness. * * *
>
> There is no reason for an alarmist attitude toward the Japanese. Those in Hawaii are not unmindful that some mischance may in the future disturb the friendly relations

between their country and our own; but they do not court such an event. * * * Their Americanization is as yet on the surface; it has not touched their hearts. * * * If the coming generation of Japanese born in Hawaii are treated with fairness, they may become as thoroughly Americanized as any of our citizens of European descent, and may contribute much to the solution of social, economic, and political problems, instead of passively existing in the community as knotty problems requiring solution by our social, economic and political mathematicians. * * * To Americanize the Orientals in Hawaii we must isolate them from direct contact and competition with the laboring classes of Asia itself. Complementary to such a policy, necessary encouragement should be given to the immigration of Europeans. The Portuguese have proved suitable settlers for Hawaii. * * *

Opportunity must be given those who save money to buy small farms. The present homestead policy is not a success. The Territory ought not to alienate valuable cane lands already under high cultivation for the profit of a few speculators and at the expense of all the people. * * *

The water rights of the islands constitute a patrimony of the people which should never have been alienated. Water as one of the component parts of a farm is quite as essential as land. It is unfortunate that all the water sources in the islands are not owned and administered by the Government. * * *

We may view labor conditions in Hawaii under two aspects. If we regard them solely as present conditions of employment, as a topic exhausted when we have tabulated wages and earnings, hours of labor, industrial accidents, and other matters pertaining to the present condition of laborers, the subject might be closed with a reference to the tables in this report. The tables show, considering the kind of labor used, the service it renders, and the history of the laboring population of the islands, a satisfactory degree of progress. * * * But if we view labor conditions in Hawaii as primarily important because they will determine the political future of the country and the character of its civilization, then these other questions—of immigration and race control, of land and water policies, and of civic development—are logically parts of the subject. From the standpoint of our national interest in Hawaii, which gives occasion to the law calling for this report, these are the questions in relation to which labor conditions are to be considered.

From this broader viewpoint the increase of a resident laboring population, the fostering of industries other than sugar making, the rise of a middle class derived from the people who work with their hands, and the increase in small holdings, are all hopeful symptoms of progress toward a true civic community, organized to secure the welfare of all its members. The Federal Government, in every policy affecting the Territory, should strive to foster such a community.

WORKMEN'S COMPENSATION LEGISLATION OF 1916.

In 6 of the 12 States whose legislatures met in regular session in 1916, the Federal Congress, and the Island of Porto Rico, legislation was enacted on this subject. The laws of Kentucky and Porto Rico are new, the former taking the place of an act of 1914, declared unconstitutional. (*See* Bulletin 169, p. 197.) In the other States the legislation was chiefly amendatory, while the act of Congress is new, superseding a number of special or incomplete laws. An account was given of the Kentucky statute in the MONTHLY REVIEW for June of the current year. The remaining legislation is noted below.

In Louisiana two amending acts were passed, one of them (No. 243) amending the act generally, materially enlarging its scope and strengthening it in its benefits to the workman, and reducing the waiting time to 1 week; the other (No. 270) makes it a misdemeanor for an employer to deduct from his employee's wages, directly or indirectly, any contribution to meet the cost of premiums or other charges for insurance under the compensation or any other act.

The Maryland statute was likewise amended in a number of points by chapters 86, 368, 379, and 597. Some of the amendments are of minor importance, as the one modifying the provision for the assessment of insurance carriers for the expense of administering the act, and that authorizing the commutation of benefits to nonresident alien beneficiaries to a lump sum on the basis of a valuation of three-fourths. The list of employments covered is enlarged by including the operation of horse-drawn vehicles; a comprehensive definition of mining is also given, and employment is to be regarded as under the act where the tipple or principal entrance to a mine is within the State, even though the workings extend beyond its boundaries. Intoxication is made a bar to recovery only when the injury results "solely" therefrom; while the word "unavoidable" is stricken from the definition of diseases and infections incurred as a result of injuries, and for which compensation is to be allowed. Also, provision for fractional losses of vision and a modification of the law as to medical and surgical aid are included.

Amendments to the Massachusetts statute are found in chapters 72, 90, 200, 307, and 308. The first provides that the report of an impartial physician shall be received as evidence in any proceeding before the accident board or a committee of arbitration, if the parties in interest have seasonably been furnished with copies thereof. Chapter 90 reduces the waiting time from 2 weeks to 10 days. The amendment contained in chapter 307 is a mere clarification of the limitation contained in section 7 of chapter 807, Acts of 1913, relating to compensation for injuries to public employees; while chapter 200 is an independent act giving to any mutual liability company authorized to do business in the State the same powers and privileges as possessed by the Massachusetts Employees' Insurance Association. Chapter 308 is likewise an independent act (*See* MONTHLY REVIEW for August, pp. 34 and 35), transferring the powers and duties of the State board of labor and industries and the industrial accident board sitting jointly to investigate industrial conditions, etc., to the State board of labor and industries alone.

In New Jersey (ch. 54) a workmen's compensation aid bureau is created in the department of labor, and charged with the duties of observing the operations of the law and making annual reports.

This bureau is authorized to investigate the causes of accidents and facts relating thereto, and is to approve and file agreements of settlement between employers and employees, which are not valid until such approval is given. If the parties do not agree within 21 days, the bureau is to undertake to secure a suitable settlement.

Extensive changes are made in the law of New York, principally by chapter 622, which makes a considerable number of additions to the list of hazardous employments covered by the act, providing also that any occupation or industry not included in the statutory list may be brought under the act by the joint election of employer and employees. In the original act compensation was restricted to undertakings carried on by the employer for pecuniary gain, and under this, municipalities had not been regarded as covered in connection with work on streets and highways, etc. The law was amended in its application to public service so as to make it applicable thereto without regard to the question of pecuniary gain. "Employees" are made to include all persons in the service of an employer whose principal business is the conduct of a hazardous employment within the act, and not merely those persons engaged in the hazardous employment, as in the original act. Another extension of the act is the inclusion of dependent stepchildren under the definition of children as beneficiaries under the act.

Insurance under the act is made to protect the employer from all liability save as provided for by the act itself. Employers failing to secure payments of compensation by insurance or otherwise in accordance with the law, are guilty of a misdemeanor; and defaulting in payments due subjects the employer to proceedings for the enforcement of the payment by judgment without appeal. Awards to dependent parents or grandparents are increased in amount, while payments on account of decedents whose beneficiaries are nonresident aliens are limited.

Insurance carriers are to bear the expense of administering the compensation law beginning July 1, 1916, from which date the State fund must pay its own expenses, instead of from January 1, 1917, as previously directed. Another act (ch. 478) adds sections to the municipal law and the State finance law by which it is provided that contracts for public works coming within the scope of the compensation law shall be void unless the contractor provides insurance for his employees. Another act tending to safeguard compensation insurance in the State is one (ch. 393) which requires the approval of the State superintendent of insurance before dividends can be paid by mutual companies insuring employers' liability and workmen's compensation and which fixes the surplus minimum of a foreign company at $100,000. In this connection may be mentioned another act (ch. 441), which permits the attachment of the property of an employer who is liable for the death of an employee.

The law of Porto Rico is elective, providing for insurance in a fund administered by the Government. There is no waiting time and no provision for partial disability.

A bill providing for compensation for injuries to all civilian employees of the United States has passed both houses of Congress at the date of this writing.

OPERATION OF THE FEDERAL COMPENSATION ACT IN 1914, 1915, AND 1916.

The cost of compensation for fatal and nonfatal injuries and the number of claims allowed under the act of May 30, 1908, providing compensation to certain employees of the United States, are shown by departments in the following table, covering the fiscal years 1914, 1915, and 1916. This table supplements the information given in Bulletin 155 of this bureau, which is a detailed report of operations under the act up to June 30, 1913. The figures shown include for each specified fiscal year only those cases which occurred during that year and for which claims were allowed. They do not include cases pending at the beginning of the year. For certain cases in 1916 reports as to the amount of compensation paid had not been received. Estimates of the amounts paid for these cases are given under the heading, "Incomplete cases," and were computed by multiplying the number of claims allowed by the average amount paid per case in 1915. The estimated total for 1916 is $346,830.05.[1]

COST OF COMPENSATION FOR FATAL AND NONFATAL INJURIES DURING THE FISCAL YEARS 1914, 1915, AND 1916 (A PORTION OF THE LATTER YEAR ESTIMATED).

Department.	1914		1915		1916			
					Completed cases.		Incomplete cases.[1]	
	Total amount of compensation paid.	Claims allowed.	Total amount of compensation paid.	Claims allowed.	Total amount of compensation paid.	Claims allowed.	Estimated amount of compensation.	Claims allowed.
Navy	$131,147.20	1,166	$181,687.44	1,530	$111,981.91	1,207	$83,679.73	403
War	114,445.52	761	110,074.45	849	41,312.43	555	52,378.60	404
Interior	64,754.08	373	63,808.64	383	9,413.73	113	10,727.20	92
Post Office	882.50	2	95.75	2	155.10	3	47.86	1
Treasury	9,305.01	78	12,967.77	76	7,276.38	60	4,948.27	29
Agriculture	13,622.70	50	17,766.25	73	4,162.19	36	8,274.68	34
Commerce	12,531.09	32	9,089.02	42	2,301.95	25	7,357.72	34
Government Printing Office	4,825.15	44	4,111.10	52	2,287.94	32	474.36	6
Miscellaneous	....	......	....	......	50.00	1	....	......
Total	351,513.25	2,506	399,600.42	3,007	178,941.63	2,032	167,888.42	1,003

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[1] The considerable falling off of the total for 1916 as compared with the amounts paid in 1914 and 1915 is largely due to the completion of important reclamation projects and the consequent reduction of the working forces.

GROUPING OF INDUSTRIES APPEARING IN THE WORKMEN'S COMPENSATION MANUAL.

A grouping of industries appearing in the Workmen's Compensation Manual, with corresponding code numbers, has just been issued by the National Workmen's Compensation Service Bureau, 13 Park Row, New York City. This work has been specially arranged for the convenience of statisticians. It contains an appendix in which will be found a numerically arranged list of discarded classification numbers and the classifications to which they refer.

This new grouping of Manual classifications has been revised to conform more closely with the needs of accident compensation. The code numbers of a great many industrial processes have been changed and a considerable number have been dropped out altogether, as will be seen by consulting the appendix. The Workmen's Compensation Service Bureau worked with the Committee on Statistics and Compensation Insurance Cost of the International Association of Industrial Accident Boards and Commissions to revise the classification of industries so as to get a more logical classification. It was impossible for the Workmen's Compensation Service Bureau to make its classifications conform exactly with the classification adopted by the Committee on Statistics and Compensation Insurance cost, but it will not be difficult in most instances to translate accident statistics from one classification to the other. To facilitate the work of translation and comparison of accident statistics recorded under the two classifications, the United States Bureau of Labor Statistics, in Bulletin 201, prints opposite each industrial process listed the Workmen's Compensation Manual code number corresponding to that process in the Manual.

The Workmen's Compensation Service Bureau has done much to bring about uniform classification of industries. The original classification issued by it was taken as the basis by the Committee on Statistics and Compensation Insurance Cost in working out a classification of industrial processes.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

NEVADA.

A report[1] has just been issued showing the operations of the Nevada industrial insurance act for the 18 months ending December 31, 1914, for the year ending December 31, 1915, and for the 30 months ending December 31, 1915, covering the entire period that the act has been in effect. The audit shows that during this period the total receipts were $560,248.09 and the total disbursements $318,574.74, leaving a cash balance of $241,673.35. Of the receipts, $557,248.09 represented premiums collected, and $25,000 was estimated as being due at the time of the report. Of the disbursements, $235,018.81 [1] was paid in compensation and $74,180.81, or 12.74 per cent of the premiums collected and due, was paid for administrative expense. The report shows total assets of $278,968.25 and total liabilities of $295,758.46, the latter being distributed as follows:

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[1] Nevada. Report of audit and investigation, by George K. Elder, certified public accountant, and Memorandum in re Nevada Industrial Insurance Act. Reviewing the operation of the act for a period of 30 months—July 1, 1913, to Dec. 31, 1915.

Reserve fund	$58, 224. 81
Pensions allowed	120, 224. 00
Liability account of pending claims (estimated)	117, 309. 65
Total	295, 758. 46

Although this indicates a deficit of $16,790.21, it is explained that 10 per cent of premium income is set aside for the purpose of creating an insurance reserve fund to provide for and absorb the shock of a catastrophe without doing violence to the general fund.

> As a matter of fact, our premium income has not been sufficient to provide the full amount required by the 10 per cent rule. By setting up an insurance reserve fund, or what might be called a catastrophe hazard fund, and assigning 10 per cent of premium income, amounting to $58,224.81, to said fund, we show apparently a deficit of $16,790.21. Eliminating such a reserve fund, we have a surplus of $41,434.60.

The following table shows the total and monthly average premiums collected and the compensation paid during the three periods covered by the report, for each specified class of industry:

TOTAL AND MONTHLY AVERAGE PREMIUMS COLLECTED AND COMPENSATION PAID FOR 18 MONTHS ENDING DEC. 31, 1914, 12 MONTHS ENDING DEC. 31, 1915, AND 30 MONTHS ENDING DEC. 31, 1915.

Class.	18 months ending Dec. 31, 1914.		12 months ending Dec. 31, 1915.		30 months ending Dec. 31, 1915.	
	Amount.	Average per month.	Amount.	Average per month.	Amount.	Average per month.
	Premiums collected.					
Mining	$189, 456. 52	$10, 525. 37	$127, 061. 47	$10, 588. 45	$316, 517. 99	$10, 550. 60
Ore reduction	22, 455. 09	1, 247. 50	13, 770. 00	1, 147. 50	36, 225. 09	1, 207. 50
Nevada Consolidated Copper Co	61, 949. 81	3, 441. 66	39, 172. 36	3, 264. 36	101, 122. 17	3, 370. 74
Railroads	10, 448. 74	580. 48	7, 017. 77	584. 81	17, 466. 51	582. 23
Public utilities	10, 111. 30	561. 73	7, 219. 15	601. 60	17, 330. 45	577. 68
State, counties, cities, and schools	6, 938. 23	385. 46	14, 297. 60	1, 191. 47	21, 235. 83	707. 86
Miscellaneous	29, 543. 74	1, 641. 32	17, 806. 31	1, 483. 86	47, 350. 05	1, 578. 33
Total	330, 903. 43	18, 383. 52	226, 344. 66	18, 862. 05	557, 248. 09	18, 574. 94
	Compensation.					
Mining	70, 686. 30	3, 927. 01	92, 313. 69	7, 692. 81	162, 999. 99	5, 433. 33
Ore reduction	6, 627. 99	368. 22	10, 203. 62	850. 30	16, 831. 61	561. 05
Nevada Consolidated Copper Co	11, 282. 27	626. 79	10, 013. 72	834. 48	21, 295. 99	709. 87
Railroads	2, 357. 60	130. 98	3, 332. 95	277. 75	5, 690. 55	189. 69
Public utilities	1, 010. 91	56. 16	2, 170. 40	180. 87	3, 181. 31	106. 04
State, counties, cities, and schools	1, 335. 52	74. 20	3, 427. 00	285. 58	4, 762. 52	158. 75
Miscellaneous	7, 647. 22	424. 85	12, 609. 62	1, 050. 80	20, 256. 84	675. 23
Total	100, 947. 81	5, 608. 21	134, 071. 00	11, 172. 59	235, 018. 81	7, 833. 96

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[1] The amount actually paid to Dec. 31, 1915, was $229,674.03; the difference, $5,344.78, being the discount taken on payments made before due.

The premiums represented in the above table were collected from 1,230 contributors, employing 11,024 workers, with a total pay roll of $31,693,712. The mining and smelting industries paid 81.45 per cent of the total premiums and all other industries (not including farm labor, stock and poultry raising, household and domestic service) paid 18.55 per cent. The average number of employees in the mining and smelting industries, on the basis of 360 days per year, was 7,261, making the average yearly premium $25.94 and the average premium rate per $100 of pay roll, $2.064.

During the 30 months ending December 31, 1915, 3,225 accidents were reported, and 1,516 claims were filed. Eighty-one accidents were fatal. Of the 1,435 nonfatal accident claims filed, 137 were rejected and 126 were in process of adjustment at the end of the year. Only 38 of the fatal accident claims were disposed of for final settlement.

NEW JERSEY.[1]

The workmen's compensation law of New Jersey, approved April 4, 1911, is compulsory only in so far as it affects State or municipal employees, but may by election be made to cover all private employments, casual employees excepted. The waiting period is two weeks. In case of death the dependents receive from 35 to 60 per cent of the wages of the deceased, the amount varying with the number of dependents; those totally disabled are allowed 50 per cent of their wages for a period not exceeding 400 weeks; and for partial disabilities there is provided a fixed scale for specific injuries, with others proportionate. Medical expenses are paid by the employer during the waiting period in an amount not exceeding $50, and in case of death $100 is allowed for burial expenses. For the purpose of observing the operation of this act an employers' liability commission was constituted and this commission, under date of December 31, 1915, filed its report for the year ending October 31, 1915,[1] including therein comparative statements for the years 1913 and 1914.

During the year covered by the report there were 7,080 nonfatal and 263 fatal accidents reported. Of the former, 2 were total disabilities, 627 were permanent partial disabilities, and 6,451 were temporary disabilities. Medical aid was supplied to 6,604 injured employees, involving a total expenditure of $100,471.08, or an average per case of $15.21. Compensation amounting to $396,483.16 was paid to 6,202 employees, or an average of $63.93 per case. It is stated that 199 cases (3.1 per cent) legally entitled to compensation did not receive it, while 239 cases (3.5 per cent) entitled to medical aid failed to receive such benefit. The table following gives the comparative record of nonfatal accidents for the three years 1913, 1914, and 1915:

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[1] New Jersey. Employers' Liability Commission. Report for the year 1915. Trenton, 1916. 58 pp.

COMPARATIVE RECORD OF NONFATAL ACCIDENTS FOR THE YEARS 1913, 1914, AND 1915, SHOWING THE TOTAL AND AVERAGE COMPENSATION AND MEDICAL BENEFIT PAID IN 1915.

Year.	Accidents.				Compensation paid.			Medical aid paid.		
	Total disability.	Permanent partial disability.	Temporary disability.	Total.	Number.	Amount.	Average.	Number.	Amount.	Average.
1913	1	515	5,234	5,750	4,103	(1)	(1)	4,659	(1)	(1)
1914	3	679	5,855	6,537	5,178	(1)	(1)	5,888	(1)	(1)
1915	2	627	6,451	7,080	6,202	$396,483.16	$63.93	6,604	$100,471.06	$15.21

[1] Not given in the report.

Of the 263 fatal accidents reported in 1915, dependents were paid in 149 cases, involving an expenditure of $297,051.58, or an average of $1,993.63. The burial expenses paid were reported in 219 cases, the amount being $23,481.56, or an average of $107.22 per case. Lump sum payments averaging $1,040.28 each were made to three aliens. There were 91 cases not involving dependents and 21 cases entitled to compensation but not receiving it. The table following shows the comparative record for the years 1913, 1914 and 1915:

COMPARATIVE RECORD OF FATAL ACCIDENTS FOR THE YEARS 1913, 1914, AND 1915, SHOWING COMPENSATION AND BURIAL EXPENSES PAID, AND LUMP SUM PAYMENTS.

Year.	Number of accidents.	Compensation paid.				Burial expenses paid.			Lump sum payments.	
		Number.	Per cent.	Amount.	Average.	Number.	Amount.	Average.[1]	Number.	Average.
1913	233	95	40.8	[2] $132,905.96	$1,947.14	59	[3] $8,449.43	$145.68	3	$363.00
1914	249	112	45.0	[4] 191,033.51	1,910.33	128	16,368.98	127.88	3	458.33
1915	263	151	57.4	[5] 297,051.58	1,993.63	219	23,481.56	107.22	3	1,040.28

[1] In each case the average is more than $100. Since the law allows only $100 for burial expenses it is not clear why more than this amount was paid in many cases—41 in 1915.

[2] This amount was paid in 68 cases, upon which basis the average is computed. In 2 additional cases, not included, an average of $2,760 each was paid, the definite amount not being given in the report. No reference is made to the disposition of the other 25 cases.

[3] This amount was paid in 58 cases, upon which basis the average is computed.

[4] This amount was paid in 100 cases, upon which basis the average is computed. In 2 additional cases, not included, an average of $622.55 each was paid, the definite amount not being given in the report. The other 10 were entitled to compensation but did not receive it, for reasons not given.

[5] This amount was paid in 149 cases, upon which basis the average is computed. In the 2 additional cases, not included, an average of $818.75 each was paid, the definite amount not being given in the report.

More than half of the report is devoted to presenting the text of legislation which the commission believes should be enacted, based upon the following recommendations:

1. The passage of a compulsory workmen's compensation law, including compensation insurance, for the protection of employers from financial disaster and assurances to those persons entitled to compensation of the payments provided by law.

2. The creation of a workmen's compensation State insurance fund.

3. Provision for the organization of a bureau of workmen's compensation in the department of labor in order to secure more efficient administration of the compensation act. (Enacted 1916.)

4. The passage of an act requiring certain protective clauses in all policies of liability insurance issued by the State.

5. The passage of a number of amendments to the present compensation act, including:

(*a*) Increase of all schedules from the present basis of 50 per cent of wages to 66⅔ per cent.

(*b*) Increase of minimum payments to $6 instead of $5, and of maximum to $12 instead of $10.

(*c*) Increase of death payments to 400 weeks instead of 300, and in case of widows, to life or until remarriage; and to children until they reach the age of 18 years; and in the case of children who are physically or mentally incapacitated, for life or until the removal of the disability.

(*d*) Increase of total permanent disability payments to life instead of 400 weeks.

(*e*) Provision for appeal to court for additional medical services in exceptional cases.

(*f*) Compensation for loss of hearing.

(*g*) Six dollar minimum for all permanent injuries.

(*h*) Elimination of the discrimination against the dependents of aliens in fatal cases.

6. Bringing within the operation of the law certain well-defined and easily recognized occupational diseases, including anthrax, lead poisoning or its sequela, mercury poisoning or its sequela, phosphorus poisoning or its sequela, arsenic poisoning or its sequela, poison by nitro and amido derivatives of benzine, poison by carbon bisulphide or its sequela, poisoning by nitrous fumes or its sequela, chrome ulceration or its sequela, eczematous ulceration of the skin produced by dust or liquids, or ulceration of the mucous membrane of the nose or mouth produced by dust, compressed-air illness or its sequela, telegraphist's cramps, aniline poisoning, wood-alcohol poisoning.

OHIO.

The Statement of the Condition of the Ohio State Insurance Fund, as of May 15, 1916, includes a table showing gross earned premiums amounting to $7,901,267.65; awards made, including paid and deferred, amounting to $6,678,328.50;[1] pending claims, including unreported, amounting to $749,398.67; total losses amounting to $7,427,727.17; surplus of $473,540.48, and gross loss ratio of 94 per cent. The net earned premiums versus loss cost, showing net loss ratio, is set forth in the following table:

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[1] Including awards made to the middle of June, 1916.

STATEMENT OF NET EARNED PREMIUM VERSUS NET LOSS COST AS OF MAY 15, 1916 (EMPLOYERS' FUND ONLY).

Schedule.	Gross earned premium.	Catastrophe reserve.	Net earned premium.	Total losses.	Surplus.	Loss ratio (per cent).
Bakers	$69,475.02	$3,818.28	$65,656.74	$70,483.19	[1] $4,826.45	107.3
Chemical—paint and drug	31,997.85	1,759.45	30,238.40	29,062.14	1,176.26	96.1
Coach—carriage and wagon	162,127.87	8,712.01	153,415.86	155,062.05	[1] 1,646.19	101.0
Coal mines	661,505.74	34,872.95	626,632.79	759,263.99	[1] 132,631.20	121.2
Contractors	1,446,289.12	75,453.34	1,370,835.78	1,126,216.77	244,619.01	82.2
Electric	142,831.41	7,585.84	135,245.57	102,282.34	32,963.23	75.6
Leather—shoes	76,911.47	4,055.15	72,856.32	60,111.11	12,745.21	82.5
Lumber	241,154.44	13,585.23	227,569.21	267,549.02	[1] 39,979.81	117.6
Meat	60,851.63	3,140.65	57,710.98	47,833.16	9,877.82	82.9
Metal	2,364,578.39	133,843.73	2,230,734.66	2,293,782.33	[1] 63,047.67	102.8
Milling	46,029.87	2,635.11	43,394.76	50,370.69	[1] 6,975.93	116.1
Mining—not coal	26,059.14	1,377.76	24,681.38	25,178.24	[1] 496.86	102.0
Miscellaneous	562,928.56	30,047.69	532,880.87	578,750.60	[1] 45,869.73	108.6
Oils	88,867.23	5,037.68	83,829.55	77,784.89	6,044.66	92.8
Ore and blast furnaces	169,545.14	10,716.80	158,828.34	170,608.77	[1] 11,780.43	107.4
Paper	151,554.24	9,023.87	142,530.37	153,344.49	[1] 10,814.12	107.6
Pottery—glass	286,718.50	16,099.90	270,618.60	317,717.70	[1] 47,099.10	117.4
Printing	85,292.61	4,611.88	80,680.73	74,288.22	6,392.51	92.1
Rubber	163,144.76	9,228.60	153,916.16	146,870.80	7,045.36	95.4
Stevedore	28,461.58	1,475.27	26,986.31	28,026.38	[1] 1,040.07	103.9
Stone	189,200.73	9,704.64	179,496.09	185,259.28	[1] 5,763.19	103.2
Textile	84,472.43	4,584.32	79,888.11	59,904.48	19,983.63	75.0
Tobacco	15,451.76	808.72	14,643.04	4,645.56	9,997.48	31.7
Vessel	14,012 90	709.74	13,303.16	18,926.39	[1] 5,623.23	142.3
Warehouse	476,264.71	25,212.86	451,051.85	410,957.25	40,094.60	91.1
Wood	195,703.12	10,700.85	185,002.27	172,529.70	12,472.57	93.2
Abstract	59,837.43	3,423.74	56,413.69	40,917.63	15,496.06	72.5
Total	7,901,267.65	432,226.06	7,469,041.59	7,427,727.17	41,314.42	99.4

[1] Deficit.

The total catastrophe reserve is that accruing from premiums on State risks, to which must be added interest received on premium deposits, amounting to $250,722.15, and self-insurance 5 per cent catastrophe reserve, amounting to $192,624.56; making a total catastrophe reserve of $875,572.77. In the statement issued November 15, 1915, this amount was $670,586.01. The net surplus is the source from which liability insurance companies would declare dividends to stockholders.

It is stated that "taken as a composite whole the Ohio State Insurance Fund is in an ideal condition of solvency," and that the deficit in several schedules in the above table will be removed when all actual earned pay rolls to May 15, 1916, have been reported in place of the estimates.

The following is the statement of the condition of the employers' fund as a whole as of May 15, 1916:

Income.

Premiums	$8,788,916.38	
Interest	250,722.15	
		$9,039,638.53

Disbursements.

Warrants paid	$4, 931, 692. 71	
Refund vouchers to employers	93, 912. 85	
		$5, 025, 605. 56
Excess of income over disbursements		$4, 014, 032. 97

Assets.

Invested in bonds bearing minimum interest of 5 per cent	$1, 896, 712. 86	
Inactive account bearing interest of from 4 per cent to 4½ per cent	1, 587, 129. 58	
Active account bearing interest at 3 per cent	9, 861. 42	
Premium in course of collection (including additional premium on account of pay-roll audits as reported by auditing department)	520, 329. 11	
		$4, 014, 032. 97

Liabilities.

Reserve for losses (to bring all claims to full maturity)	$2, 496, 034. 46	
Reserve for unearned premium	601, 111. 32	
Surplus fund (catastrophe reserve). 1. Statutory reserve	624, 850. 62	
(*b*) Nonstatutory surplus. 2. Interest	250, 722.15	
Net surplus	41, 314. 42	
		$4, 014, 032. 97

Had the plan ceased operating on May 15, 1916, there would have been returned to employers $916,887.19, distributed as follows:

Surplus fund from State risks (statutory catastrophe reserve)	$432, 226. 06
Surplus fund from self-insuring risks (statutory catastrophe reserve)	192, 624. 56
Surplus from interest on premium deposits (nonstatutory reserve)	250, 722. 15
Surplus from excess of earned premium over all losses	41, 314. 42
Grand total surplus fund	916, 887. 19

The commission increased 196 rates and reduced 275 rates as of July 1, 1916.

The report argues the economic value of the Ohio State Insurance Fund to employers by presenting two tables, one showing for specific industries the current workmen's compensation insurance rates under the Ohio plan as compared with liability insurance companies' rates in Pennsylvania, Indiana, Michigan, Illinois, Wisconsin, and Kentucky; and the other showing the Ohio State fund rates compared with Ohio stock companies' rates. For 82 representative industries the Ohio State fund rate totals $114.43.[1] Taking this as

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[1] The total of the rates is $106.94. To this has been added 7 per cent for average rate.

100 per cent, the percentages for the States mentioned are as follows: Pennsylvania, 137; Indiana, 157; Michigan, 160; Illinois, 201; Wisconsin, 215; Kentucky, 225. Ohio stock companies show a percentage of 232. It is noted that the Ohio plan provides a higher scale of benefits than any other plan represented in the table.

The report states that the Ohio plan has been operated at an expense ratio equivalent to 11 per cent of the earned premiums as compared with an expense ratio of the liability insurance companies of 45 per cent.

WORKMEN'S COMPENSATION INVESTIGATION COMMISSION, UTAH.

The governor of Utah has appointed the following persons as members of the commission authorized by the law of March 16, 1915, to investigate workmen's compensation laws and draft a tentative compensation measure to be presented to the next legislature of that State: Judge LeGrande Young, H. B. Windsor, and H. K. Russell, Salt Lake City; Charles H. Pearson, Ogden; Don B. Colton, Vernal; and Ira R. Browning, Castledale.

DRESSMAKING AS A TRADE FOR WOMEN IN MASSACHUSETTS.

Bulletin 193 of the Bureau of Labor Statistics is a study of the dressmaking trade in Massachusetts.[1] Two hundred women workers and 100 employees of various types were interviewed in Boston concerning processes of the trade, means of learning these processes, the various occupations, requisite qualifications, length of time necessary to acquire them, the wages paid for the various kinds of work, the seasons and their significance to the different types of workers. In addition, the bulletin includes statistics gained from a study of the trade made in Worcester, Cambridge, and Somerville for the State board of education, and the results of a survey in Lowell. Supplementing these facts, data concerning wages, actual earnings, and seasons were obtained from pay rolls of 14 custom shops employing 735 workers and from two dressmaking factories covering 522 workers.

The development of the dressmaking trade is traced through four general stages—the family dressmaker; the journeyman dressmaker; the custom dressmaker, including the private worker and the specialized and commercial branches of the trade, and the manufacturer. Chapter 3 discusses the industrial conditions in the trade, including business administration and the problems of capital, competition, and the labor force. Chapter 4 deals with irregularity of employment, emphasizing the seasonal character of the work and the instability of the labor force. The prevalence of overtime, wages and earnings in Boston, and opportunities both inside and outside the shops for learning the trade are each considered in a separate chapter.

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[1] Dressmaking as a trade for women in Massachusetts. United States Bureau of Labor Statistics, Bulletin 193 [in press]. Washington, 1916. 175 pp.

Dressmaking is said to rank among the best of women-employing industries in offering the workers a living wage, the reason given being that the fundamental and underlying principle of women's dress is variety, which makes the trade one of the least standardized in process and product. Notwithstanding it is one of the most seasonal of all trades, it seems to offer opportunities for self-development and financial advancement discovered in few other industries open to the woman of limited education. Especially is this true in the custom branch of the trade.

In the general survey of the dressmaking trade in Massachusetts two tendencies are noted: Production under the factory system—the stage of the manufacturer—has shown a phenomenal growth within the last few decades; and in the custom branches of the trade the small and medium-sized shops are disappearing before the competition of the domestic or day workers on the one side and the large shop on the other. For example, the relative importance in the cities mentioned of day and home workers as compared with the custom dressmakers is shown by the fact that of 1,627 employees only 18.7 per cent were reported as custom dressmakers.

As the trade passes through these successive stages, the place of production seems to show a continuous movement away from the home toward increasingly commercialized and industrialized quarters. The size of the working force and to a certain extent the quality of the product alter from stage to stage so that each has certain characteristic conditions as to division of labor and wages paid. The plain sewer receives from $6 to $9 a week, this wage remaining about the same whether she goes out by the day or works in a specialized shop. As the trade develops, more and more specialized workers are added, until each department has its head worker, whose wages range from $10 to $50 or $60 a week, depending on the degree of responsibility, with a force of assistants whose wages range downward to $6 or less, according to the character of their work.

The opportunities for young workers to learn the trade vary with the different types of shops. In general they were found to be best in the shop of moderate size, where the worker is still under the immediate supervision of the employer, where subdivision of labor has not been carried to a point which deprives the learner of an all-round training, but where the class of work done enables her to fit herself for the higher branches of the trade. The medium-sized shop, however, is being crushed out by competition. At best the opportunities for acquiring the trade in the shop are limited and unsatisfactory.

The report gives in detail the wages received by workers performing each process. Forty-nine per cent of the custom and 36 per cent of the factory workers, 16 years of age and over, studied on pay rolls, received $9 or more; 66.9 per cent of the custom and 52.9 per cent of the factory workers received $8 or more. This is a very good showing compared with other women-employing industries.

The study of the industrial conditions of the trade brought out three problems—the need for capital, competition, and the difficulty of securing skilled workers—which are set forth as vital factors in determining the development of the dressmaking trade. Recruiting the labor force is a most serious problem, since the disappearance of the apprenticeship system and of opportunity for learning the trade in the shop, together with the increasing demand for skill and artistic ability, are leaving both employers and employees in a practically untenable position. Many of the workers are recruited from the Boston Trade School for Girls; of the 317 interviewed in this connection, 39.1 per cent had secured their positions through this agency. Approximately 33 per cent were employed through friends, relatives, or personal acquaintance with forewomen or employers. The report gives considerable attention to the reasons why girls enter this trade, the nationality of workers, their age at beginning work, their previous employment, schooling received, the attitude of their parents toward dressmaking as a trade, the living conditions of the workers, and their attitude toward the unions.

An entire chapter is devoted to a discussion of the irregularity of employment, due primarily to seasonal fluctuation and instability of the labor force. Taking the trade as a whole, the working year varies with the city in which the shops are located, since it is the social life of the people which determines the seasons. Most of the shops scheduled work 10 and under 11 months. Seasonal fluctuation and irregularity of work reach their height in the large shops of the specialized workers. As to the season of the individual workers, it was found that only 21.8 per cent of the custom and 15.3 per cent of the factory workers were employed as much as 40 weeks, the characteristic trade year, in one shop. Two reasons are given for the instability of the labor force—lack of opportunity to learn the trade and the inability of the workers to measure up to the demand. "The trade no longer provides the opportunity for training its workers, yet it increasingly demands greater skill and ability."

The report notes considerable overtime in the dressmaking trade. The usual day is 9 hours. More than half of the 200 workers visited reported overtime during the year; one-third of those reporting received no pay for additional time and work. Overtime was reported for 59 shops, though in only 6 was it habitual or frequent. More than one-third (39 per cent) of the 59 shops did not pay for overtime.

Data on wages and earnings in Boston show that more than one-half in custom and two-thirds in factory dressmaking are industrial workers, with varying degrees of manual skill, earning from $5 to $10, and that the professional workers who combine skill with artistic and administrative ability, representing one-third of the custom and one-fifth of the factory workers, are found in the $10 to $15 wage group, though experts and heads range from $18 to $50 a week. Viewing the wage with regard to two important factors, age and experience, those earning less than $5 were found to be young workers with short experience and those earning $18 and over young women between 25 and 30 years of age with a working experience of more than 10 and less than 20 years. The large group earning $7 to $10 comprise an infinite variety of ages and experience. But the real earnings of the worker can not be accurately estimated from her nominal weekly wage, for this is decreased by two important factors—short absences and dull seasons. Short absences of less than a week reduce the income of the custom worker about 10 per cent and that of the factory employee 14 per cent. The loss from slack seasons is more difficult to estimate, but it is probably considerable.

The importance of coordinating technical training with trade experience is emphasized. To this end it appears necessary to increase the opportunity for acquiring skill and artistic ability through the trade schools, where the fundamentals may be learned so that the girl may be fitted to enter the trade with that knowledge which she would otherwise have gained through the apprenticeship system which disappeared about the beginning of this century. Suggestions along this line are offered for the benefit of the educator, the placement worker, the parent, the prospective worker, those interested in promoting industrial welfare, and the customer.

REPORT OF WOMEN'S CLOTHING WAGE BOARD TO MASSACHUSETTS MINIMUM WAGE COMMISSION.

A report was made July 19, 1916, to the Massachusetts Minimum Wage Commission by the Women's Clothing Wage Board, appointed to investigate wages of women in women's clothing factories, recommending that adult women in such factories be paid not less than $8.75 for a full week's work. The board also recommended a minimum wage of $7 a week for inexperienced women and $6 for girls under 18 years of age. Hearings were appointed, beginning August 3. The recommendations have not yet been approved by the Minimum Wage Commission. If finally adopted the rates are to be mandatory and are to go into effect February 1, 1917.

THE MINIMUM WAGE BY LAW.

A report bearing the above title [1] was made by Alexander J. Porter, chairman of the minimum wage commission of the National Civic Federation, at the sixteenth annual meeting of that organization, in Washington, D. C., January 17, 1916. The first part of the report is a discussion of the important features of the minimum-wage problem, the views of proponents and opponents, propositions favoring legislation, trade-union opposition, attitude of employers, and the basis of wage determinations. The second part, which was prepared by Miss Marie L. Obenauer, relates to the present status of the minimum-wage controversy.

What is termed by the report the most conspicuous feature of the minimum-wage controversy, is the fact that "capital and labor do not mark the lines of its cleavage." This means that both among employers and among workers there are those who favor and those who oppose minimum-wage legislation. Thus, such legislation was enacted in California against the opposition of organized labor, while the Brooklyn Central Labor Union pronounced in its favor; and a recent report of the National Manufacturers' Association was adverse to such legislation, while the retail dry goods associations of California and of San Francisco indorsed it. The views of a number of representatives of capital and labor are given, opinions both favorable and unfavorable being expressed by each side. The commission expresses the belief that the fate of minimum-wage legislation in this country hangs upon the decision of the United States Supreme Court as to the constitutionality of the Oregon law, a decision which has been pending since December 17, 1914. The fact that this law embodies the features subject to judicial review in most of the other State minimum-wage laws renders this decision especially important.

The discussion of minimum-wage legislation by the public, as distinguished from employers or wage earners, is stated to revolve about the following propositions in its favor:

1. Wage boards recognize the impossibility of the individual worker dealing with the employer on equal terms.
2. The great mass of women workers, because of their youth and their brief tenure of industrial status, are unorganized and are likely to remain so.
3. As it is a distinct menace to the common weal that these women—prospective mothers of men—should work for subnormal wages, the State is forced to take action.

In regard to the opposition to minimum-wage legislation on the ground that it is contrary to the spirit of American institutions and leads to socialism, a statement of Prof. Henry R. Seager, of Columbia

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[1] The Minimum Wage by Law: A survey of its status in countries where such legislation has been enacted. Issued by the Minimum Wage Commission, National Civic Federation. New York, 1916. 49 pp.

University, is quoted to the effect that, in his belief, such legislation differs only in degree from the legal regulation of safety and sanitary conditions and hours of employment; that the spirit of American institutions, as interpreted by the United States Supreme Court, is broad enough to embrace hour regulations for women and children, and even for men in hazardous employments, and that if the need and efficiency of minimum-wage regulations can be demonstrated they will be recognized as within the scope of that broad power of police through which individual liberty may be curbed for the common welfare. Another and a more important objection, namely, "That a State which decrees that its citizens shall not be employed for less than the living wages that may be prescribed is logically bound to see that such citizens be given employment at such wages or be maintained in some other way," he acknowledges as valid. He maintains, however, that great advantage would result from the serious attention States enacting laws of this kind would be obliged to give to such problems as unemployment and its remedies, industrial education and vocational guidance, and making provision for indigent widows and orphans and other dependents.

Organized wageworkers in America are particularly interested in the possible effect of the legal minimum wage on trade-unionism. They reason that if it "should carry with it disintegration of the vital forces of the labor union, though it might persist in name, and even grow in membership, the union would be deprived of its essentials of independence, self-direction, and elastic adaptation to the needs of a forceful mass mechanism." They see that "the substitution of a series of court determinations for union decisions would inevitably convert the labor organization in its essential substance from a self-governing entity into a mere association of petitioners for favor at the hands of a dominant power foreign to their body."

It is pointed out that the minimum wage in this country is an American problem, entirely distinct in economic, legal, and social aspects from that in other countries. When Victoria and New Zealand first passed laws regulating wages, trade-unionism was at a low ebb, unemployment general, and the working classes helpless, and the inception of the minimum wage was largely in the line of compulsory charity. The increase in membership of Australian labor organizations is interpreted by American unionists opposed to the minimum wage, "not as a growth of true unionism, but merely as a logical necessity for the association of wage earners in order to meet the requirements of statutes which contemplate petition, representation, and inclusion in awards when wageworkers perforce deal with wage courts. * * * The labor movement in Australia has become, through State action, a thing of court permission, direction, and limitation. * * * This prospect does not add to the comfort of trade-unionists in this country, accustomed to having quite often their own way."

From a general expression of their sentiments American trade-unionists apparently consider that the legal minimum wage is interwoven with compulsory arbitration, and this has been denounced in trade-union conventions, both in this country and in Great Britain. It was stated in a report made two years ago at the Seattle convention of the American Federation of Labor that the labor movement of America had, "through the force of organized effort, succeeded in establishing minimum wages and maximum hours of labor far superior to those prescribed by the wage boards of other countries," and the executive council was instructed "to watch developments where such legislation is in force and to record carefully the activities, the decisions, and the trend of minimum-wage boards."

Representatives of capital who are opposed to the minimum wage base their judgment on the ground not only of its unconstitutionality, but also of its impracticability. Apparently, however, employers in the United States do not consider the minimum wage a problem of the first order, and the statement is made that in general their attitude toward the subject is undefined, or rather a set of mingled sentiments, none very strong; they are not inclined to question a method having possibilities for good for the weaker elements of society, though they doubt whether laws can be devised to cover all such elements. At the same time they insist that all principles relating to hiring labor ought to be of general application. A representative of the largest employers' association in America expresses the opinion that the minimum wage must tend to become the maximum.

Regarding the basis of determinations, the conclusion is reached that before there is any agreement of what is a fair day's pay there must also be an agreement as to what is a fair day's work for the average worker in a given industry, and this is declared to be true, notwithstanding the general legal requirements that cost of living shall be the basis of the determination.

With reference to the desirability of minimum-wage legislation, the opinion is expressed, in summing up the first part of the report, that experience is insufficient at present to warrant any conclusion, and it is recommended that observation and investigation be continued another year.

In the second part of the report a review is made of minimum-wage experience in this country and in foreign countries, in order to ascertain the status of the minimum-wage controversy. The only record available in this country was that for Oregon, covering 2,000 women affected by wage determinations, and these determinations had been in effect not over six months and in some cases less. In regard to this experience, the following statement is made:

> The results of the first half year's experimentation with minimum-wage determinations in this country, according to the records submitted by employers, show that no jeopardizing burden has as yet been thrown upon business. They further give evidence of some substantial gains in wage rates and earnings. The results also show a decrease in the number of women employed, somewhat in excess of the decrease in the amount of business done, and also in excess of the decrease in number of men employed. To what extent these results are temporary, are affected by local or general business conditions, and to what extent they indicate ultimate effects on minimum-wage legislation, further experience alone will tell.

Information as to the operation of minimum-wage laws in foreign countries is limited to Australasia, no record of experience being available from Great Britain and France, which are the other foreign countries legally recognizing the principle of minimum-wage determinations. Even in Australasia the figures are incomplete, and relevant data are confined principally to Victoria. The reason given for not taking New Zealand into consideration is that the theory of the minimum wage there is to adjust the scale of wages, not to the minimum needs of decent and healthful living, but to a fair relation to the profits of industry, and that "it is just one instrument of power for the compulsory settlement of industrial controversies."

The principle of the minimum wage in Victoria has grown since 1905, when it was given statutory permanence, until determinations now cover one-third of the workers in all pursuits. In seeking to apply the experience of that country to the problem in the United States, however, the differences in conditions must be carefully considered. In the first place, the minimum-wage law in Victoria includes men under its provisions. In this country the exclusion of men places the burden of the expense of maintaining a living wage upon the industries in which woman and child labor is a substantial item in cost of production, and restricts the area to which the problem applies. In Victoria the principle applies to both skilled and unskilled occupations, and the extent to which high-paid occupations bear the burden of the minimum for the unskilled is difficult to ascertain. The fundamental conditions under which the principle of the minimum wage has developed in Victoria differ widely from those in this country. One difference, namely, the slow growth of population in Victoria as compared with the increase in this country, is attributed to its remoteness from European markets and the severe droughts, and not to the effect of labor legislation, as has been claimed by some. The most significant difference is the homogeneous character of the population, as compared with ours. In Victoria 97 per cent are native born or born in the United Kingdom. On this point the report says:

This important difference * * * is by no means a warrant for concluding that minimum-wage legislation can not succeed here, but it should act as an effective check upon the wholesale assumption that because one type of such legislation has endured and grown in a homogeneous population, a modified type will take a like course among a heterogeneous people.

This difference in population has a direct and serious bearing upon the fact that our laws require the determinations to be made on the basis of healthful living. In some States no other consideration is even named. Such a basis is much less difficult to find in a land of homogeneous population than it is in a country whose peoples are so diversified and whose standards of living vary as widely as they do in this country. The task before the minimum-wage authorities in the United States is to trace out a common base line of "reasonable health and comfort" where no common standards prevail, and the voluminous discussions, including those on Australasia, do not furnish much concrete data.

On the great problem of interstate competition, which has figured prominently in most recent controversies over restrictive legislation affecting women and children in industry, Australasian experience furnishes very limited instruction.

The final conclusion reached is that the efficacy of the minimum-wage principle in the United States must be measured chiefly by the results of the experiments we are ourselves making. To make intelligent progress, more information, of an up-to-date, accurate, complete, and unbiased character, showing the effects of wage determinations both upon woman and child labor and upon the industries affected, is absolutely necessary.

MINIMUM-WAGE LEGISLATION IN AUSTRALASIA.

According to Prof. M. B. Hammond, who, because of his recent studies in Australasia, speaks with special authority, this study,[1] which appears as Appendix VIII to the Fourth Report of the New York Factory Investigating Commission, "furnishes the most complete account of the Australasian efforts to regulate wages and working conditions by means of compulsory arbitration courts and wages boards that has yet appeared in the English language." Prof. Hammond thinks that the title of the monograph is inadequate, for "a reader interested in compulsory arbitration as a means of lessening strikes would hardly expect to find here a treatment of such legislation and its results, although the author has discussed fully all the subjects covered by the arbitration courts, not merely their work in establishing a minimum wage."

Dr. Paul Stanley Collier, the author, does not write from first-hand knowledge but bases his study upon literature, official and otherwise, personal interviews with those familiar with the subject, and by correspondence with public officials in Australia and others having intimate knowledge of the laws and their administration.

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[1] Minimum-wage legislation in Australasia, by Paul Stanley Collier. Published as Appendix VIII of the Fourth Report of the New York Factory Investigating Commission, pp. 1845-2268. Albany, 1915.

The larger portion of the monograph is devoted to the organization, activities, and accomplishments of the minimum-wage boards in Victoria, which were established primarily to do away with the worse forms of sweating and underpayment in certain industries; to the work of the conciliation councils and arbitration court which were provided in New Zealand originally for the purpose of achieving industrial peace; and to the legislation enacted in New South Wales to regulate the terms of industrial contract and the right to strike, which is characterized as a type midway between that of Victoria and New Zealand. Comparatively little space is given to the Federal law and the decisions of the Commonwealth arbitration court which have furnished standards for other tribunals.

The author notes three general methods for the establishment of a legal minimum wage:

> First, by the enactment of a statutory rate positively forbidding the payment of a lower wage than that specified; second, by an order of a compulsory arbitration court fixing minimum wage rates and employment conditions for various classes of workers; and lastly, by a determination of a wage-board arrived at by a compulsory conference of employers and employees. Aside from these general plans, there is the well-known method of conciliation.

It appears that the minimum wage in Australasia has been fixed either by wages boards or by a compulsory arbitration system with the deciding power lodged in a court consisting of a judge and perhaps a representative of the employers and of the employees. Several points of resemblance between the two systems of regulation are noted:

> (1) A minimum wage for adult workers and a special rate for those less competent is provided for by each method. (2) Each plan has passed through an evolution more or less similar. The minimum rate itself, the permit scheme, provisions for learners, the enforcement of awards and determinations, the penalty for discrimination against those taking part in the proceedings of a court or boards, the repression of strikes, and the need for conciliation, all these are problems which have arisen in the course of time under both methods and have been met in much the same way. (3) Under every system except that of the Commonwealth the main tribunals for the fixing of wages are deliberative bodies, where both employers and employees are represented.

Likewise, several points of difference between the two methods are noted:

> (1) Wages boards as such have no jurisdiction over strikes and lockouts as do the courts of arbitration. (2) The scope of the arbitration courts is wider and their quasi legislative and judicial powers are greater than those of the wages boards. (3) Under the wages boards plan there is less interference with individual rights, contracts, and organizations than under compulsory arbitration. (4) The wages-boards scheme in its purity implies the voluntary submission of the parties with compulsion only after

> every form of investigation and appeal is exhausted; arbitration relies essentially upon compulsion. (5) The wages boards make no distinction between unionists and nonunionists, but have dealt with men as individuals. Compulsory arbitration depends essentially upon organization, and as unionism has been a most important factor in its administration preference is frequently given to unionists.

Admitting all the differences that exist, it is believed that these two plans of wage regulation are approaching each other in many esssential respects.

The author traces the origin and general nature of the wages-boards system in Victoria, affecting approximately 150,000 workers,. and cites the effect of certain awards made by specific boards, notably in the bread making, furniture making, boot and shoe, and men's clothing industries. As a result of the operations of the boards, wages have been raised but, it is stated, not to the extent that has often been claimed. The average increase seems to have been greater in the board than in the nonboard trades, but this may be due to the fact that the former are larger and more important. "Not the least important is the indirect effect of board determinations in maintaining the wage scale in nonboard trades higher than it might otherwise be." In the following summary the author admits certain difficulties in the administration of the Victoria plan, but also notes its possible advantages:

> In the administrative history of the Victorian plan are illustrated all the defects usually found in such a scheme. The problem of industrial education is still unsolved. The system of apprenticeship has in many ways been a failure, so much so that Mr. Justice Higgins has characterized it as "a farce." Despite the strong influence of the Commonwealth court and the attitude of the court of industrial appeals, the wages boards do not adhere to any fixed principles in making their determinations. The permit system has been quite successful, but even this has not prevented the unfit in some lines from failing of employment. The old-age pension scheme is one phase of a policy which must ultimately involve the care of society's misfits. The enforcement of the law, now upon an efficient basis, has demonstrated that collusion between employer and employee is most difficult to prevent where it is seriously attempted. * * * The cost of administration has been quite moderate for the amount of work done, being £9,922 ($48,285.41) for the year 1911–12. Taking everything into consideration, it may be said that the administrative difficulties in Victoria have largely been overcome by the tact and purpose of sympathetic officials.

In New Zealand the conciliation councils, which superseded the original conciliation boards, appear to do practically the same work as the wages boards in Victoria, and dispose of a large majority of disputes without recourse to the arbitration court. The subjects falling under the jurisdiction of this court include wages and remuneration of workers, the hours of employment, sex, age, and qualification of workers, and the mode, terms, and conditions of employment. As already suggested, the arbitration law was passed with the object of securing the abolition of strikes, and to this end it has furnished a means for peaceful collective bargaining through the former conciliation boards and the present conciliation councils. The author concludes:

> Strikes have not been abolished, but have been restricted. * * * It is true that preference to unionists, the apprentice question, and the permit system have been subjects of controversy. But what reform measure of any consequence has ever survived without criticism? If the court has not raised wages to meet all the demands of labor, neither has it thwarted the expansion of industry. It has been the cause of generally raising wages to a small extent, and has established crudely the cost of existence as the minimum standard of remuneration. It has shortened hours and given payment for overtime. It has steadied business and helped to bring prosperity to employer and employee alike. On the other hand, it has not prevented in certain districts almost the whole value of a rise in wage being absorbed by an increase in the rents of dwellings. Slight wage increases have sometimes been made the pretext for inordinate exactions in the price of food. But the cost of living has not outstripped the reward of toil and the well being of the masses is further advanced now than it was 20 years ago. Sweating has been definitely abolished. Competition has been put upon a fairer plane. Female workers have been put upon a level vastly superior to that of the prearbitration days and thus have been largely disarmed as the industrial competitors of men. The act was not intended to solve problems of rent, land values, the tariff, and taxation. It was intended to secure industrial peace, and in this it has been but partially successful.

The author points out that in New South Wales wage legislation combines the fundamental essentials of an arbitration court and wages boards, but that it has, if anything, a wider scope of control than the systems of Victoria and New Zealand upon which it was patterned. Legislation at first provided for voluntary settlement of disputes, but the result seems to have been meager and in 1901 a compulsory arbitration law was enacted which differed fundamentally from the New Zealand system in that it eliminated conciliation entirely, leaving compulsory arbitration as the one and only method for dealing with all disputes. This law, however, apparently failed to accomplish the ends for which it was designed. Accordingly, in 1908, the arbitration court was combined with the system of industrial boards, through whose efforts, it is stated, wages have been raised, women have profited from the conditions established sometimes to the detriment of men, the cost of living has increased but not because of the rise in wages, unemployment has apparently decreased, and there has been a growth in trade-unionism. Pointing out certain deficiencies in the system, the author suggests that stringent prohibitions have oftentimes failed to prevent strikes, prices have sometimes been forced up upon the mere pretext of a wages board, collusion between employer and employee to evade the law has not been unknown, and awards have overlapped.

> In no other State has the principle of the living wage been so ably enunciated, or the wage itself been so clearly defined and accurately fixed. But in the practical application of the principle, the minimum wage has often been fixed higher than

> the living wage. While there are strong arguments against this practice it has guaranteed to the workingman a share in the fruits of prosperity. It has given him a foothold in his struggle for better things. For this reason if for no other, compulsory arbitration is entitled to consideration as one method of solving the problem of the underpayment of the working classes. Admitting the disadvantages of wage regulation as exemplified in this State, it deserves a hearing as a solution of one of the most serious of our industrial ills.

The Commonwealth conciliation and arbitration law, originally enacted in 1904, "constitutes the only industrial tribunal in Australia which has the power to put competing employers of all States upon the basis of equality." The jurisdiction of the court includes all matters relating to work, pay, hours, rights or duties of employers or employees, and the conditions of employment or unemployment. Its verdict is final. Strikes and lockouts are prohibited by a fine of £1,000 ($4,866.50), but peace by conciliation rather than by arbitration is the primary purpose of the court. In determining the minimum wage this court has apparently considered the market value of services rendered as the most important test to be applied, although allowance seems to have been made for such factors as the responsibility of the work and the increased cost of living. Mr. Justice Higgins seems to have established the principles upon which to fix the minimum rate for unskilled labor when he declared that it should be an amount necessary to meet the "normal needs of the average employee regarded as a human being living in a civilized community." This wage in a recent case before the court was fixed at 50 shillings ($12.17).

The following excerpts from the concluding chapter present a brief summary of the effect of wage legislation and its administration in Australasia:

> Notwithstanding these difficulties [certain limitations imposed upon the various courts], the jurisdiction of the several acts has not been limited so as to seriously impair their effectiveness. Freedom of reference coupled with the desire to conciliate is the first essential of effective wage legislation.
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> The practice of giving conditional preference to unionists has been quite successful.
>
> The extension of an award or determination so as to include all of the establishments in any given industry within a State or locality, otherwise known as the common rule, is a procedure common to several States in one form or another. It has been employed most frequently in New Zealand and in New South Wales, and in some cases has been of unquestionable value.
>
> The problem of the less competent worker, which was not recognized at the outset, has been met by the issue of licenses, entitling the person to whom one is granted to work for a lower rate than the minimum for a certain period of time. * * * It should be remembered that in the main times have been prosperous and that the old-age pension scheme has helped to take care of the real incompetents. Yet it must be admitted that the permit system has quite effectively performed the function for which it was created.
>
> For simplicity of procedure and early decisions, the wages boards and conciliation conferences are superior to the arbitration courts. * * * As regards cost, wages

boards are more inexpensive to the parties concerned than arbitration courts. * * * It may be that the administrative expenses should be reduced, but considering the nature of the work accomplished, it can hardly be claimed that the cost of these tribunals is excessive.

Rates [of wages] with some exceptions, have usually been advanced by the orders of the wage tribunals. Wages in trades so governed have generally increased during the past decade or more, as have wages in unregulated trades and throughout the world. Women as well as men have benefited thereby.

In Australia generally it would seem that the effect of wage awards and determinations has been to unduly inflate the pay of unskilled as compared to skilled workers. * * * But this is not saying that the minimum wage is necessarily the maximum. Although statistics as to wage distribution are largely lacking, the weight of opinion is contrary to this supposition.

Taking conditions in Australasia as a whole, for the period preceding 1912, there is no evidence to prove that the increase in the cost of living outstripped the rise in wages.

Upon the whole wage legislation has not meant the displacement of men by women workers.

In the experience of Australasia there is no justification for the contention that higher wages necessarily mean higher prices for the finished product.

In conclusion the author declares that the regulation of wages by law is no longer regarded as an experiment, but holds an accepted place in the labor legislation of these countries. In New Zealand the arbitration law seems to have been advocated by the middle-class Liberals and supported by the trade-unionists, with a similar situation in Victoria and South Australia, while the labor interests appeared more directly responsible for the legislation of Western Australia, New South Wales, Queensland and the Commonwealth.

Initiated for different reasons and at different periods, the wage and arbitration laws of Australasia have had a various yet similar history. As regards administration the problems involved in the definition of the minimum wage in the matter of apprenticeship, in the extension of awards and determinations, in the granting of permits to the less competent workers, and in the actual enforcement of the law—these problems have been much the same and the outcome in each State has been similar. From the economic and social standpoint, positive gains are to be recorded. Home work has been reduced to a minimum and sweating has been definitely abolished. The cost of living has increased with the rise in wages, but this has not necessarily been due to a resulting increase in the cost of production. There is no evidence that the efficiency of production has been diminished, and industry has generally prospered.

As opposed to these facts the negative aspects of the situation are not to be minimized. Occasionally the wages boards have been dominated by capital, and it is doubtful if discrimination against employees can be prevented in such cases. Interstate competition has sometimes forced a board to fix an unduly low rate of wages, but the Commonwealth court has proved itself effective in meeting this difficulty. Following the enactment of wage decisions, some workers have been discharged, but where displacement has occurred the inefficient worker has been the first to go. Strikes and lockouts are still prevalent, but have been restricted. Some of the workers seem to be losing their so-called fighting spirit, but labor is better organized to-day than ever before. The opinions of certain classes have also undergone a change. In New Zealand it was the employers who first opposed the act. After a series of unfavorable awards it is the employees who are now inclined to regard the acts with distrust. Seven judges have presided over the court since its creation, and some of them have been severely criticized because of the awards they have made. But notwithstanding, the principle of regulating wages, at least in Australia, is generally sanctioned both by employers and employees. On March 31, 1914, 445 awards and agreements were in force in New Zealand. One month later there were effective in Australia 575 awards and determinations and 415 industrial agreements. The fact that each law has been amended and redrafted so many times is an eloquent testimonial to the fact that the people of Australia have no desire to return to the old system of unrestricted competition in the purchase of labor. Among the trade-unionists the feeling seems to be growing that more can be gained by compulsory arbitration than by wages boards.

APPLICATION OF THE MINIMUM-WAGE LAW FOR FEMALE HOME WORKERS IN THE CLOTHING INDUSTRY IN FRANCE.

In its January to May issues of the current year, the bulletin of the French Ministry of Labor gives a list of the Departments in which minimum-wage boards (*comités de salaires*) and boards of trade experts (*comités professionels d'expertise*) have been established and shows the minimum time and piecework wage rates determined by these boards in pursuance of the law of July 10, 1915, a translation of which may be found in volume 1, No. 6, page 36 ff of the REVIEW.

The Departments in which wage boards and boards of trade experts have been established are the following: Seine-Inférieure, Morbihan, Haute-Savoie, Hautes-Alpes, Basses-Pyrénées, Nièvre, Haute-Loire, Lot, Indre-et-Loire, Territoire de Belfort, Landes, Savoie, Cantal, Corrèze, Côte d'Or, Finistère, Jura, Sarthe, Pyrénées-Orientales, Loire, Hérault, and Alpes-Maritimes. The minimum time wages determined vary between 18 and 35 centimes (3.47 and 6.76 cents) per hour and the piece wages were compiled by the boards by fixing the time required for the execution of the individual articles and multiplying this time by the minimum rate per hour.

In one instance, that of the Department Hérault, the minimum wage of 27½ centimes (5.31 cents) per hour determined by the wage board was protested by the Government and an appeal for a review made to the central wage commission, sitting in the Ministry of Labor, which reduced the minimum wage to 22½ centimes (4.34 cents).

LABOR LEGISLATION OF NEW YORK IN 1916.

The outstanding piece of legislation coming under this head is the very considerable extension of the compensation law, noted under the title, "Workmen's compensation legislation of 1916" (p. 52). Other acts relating to the same subject are discussed under that heading also; while, with the exception of a few items of minor importance, legislation on other subjects is noted below.

Amendments to the Factory Law permit plate glass instead of wired glass in factory windows in certain situations (ch. 62); and except factories with automatic sprinkler systems from statutory requirements as to fire-alarm signal systems and fire drills (ch. 466).

Chapter 465 amends the section of the Labor Law relative to the issuance of employment certificates for children in factories and in mercantile establishments. The sections applying to the respective employments are made identical and the requirements more stringent, one provision being a prohibition of issuance of employment certificates to children under 15 years of age who are not graduates of a public elementary school or its equivalent. Another amendment (ch. 278) extends the provisions of section 485 of the Penal Law, which relates to the employment of children under 16 years of age at certain restricted occupations, to the production of motion-picture films. Such employment is placed in practically the same class as concerts and theatrical exhibitions, except that applications for motion-picture work by children under 16 years of age must describe in detail the part to be played by the child.

Railroad employment is affected (ch. 424) by extending the requirements of existing law to the effect that locomotive engineers must be able to read and speak English, and to see and understand signals, bringing other train employees and flagmen, except crossing flagmen, within the act.

Affecting classes of persons less frequently included in the groups for whom labor legislation is usually enacted are chapter 587, which regulates theatrical contracts and fees, and chapter 586, which creates in the department of agriculture a bureau of farm settlement for the distribution of immigrant agricultural laborers.

Chapter 151 amends the Penal Law with reference to the observance of the various hours-of-labor laws of the State, the provision for forfeiture of the contract for a violation of the eight-hour statute for labor on public works being stricken out of the penal law; while by chapter 152 this eight-hour law is amended by fixing as penalties for its violation fine and imprisonment for the first offense, a second offense operating to forfeit the contract, in addition to an increased fine.

COMPULSORY ARBITRATION IN NORWAY.

The principle of compulsory arbitration in the settlement of a limited class of industrial disputes has been recognized in Norway recently, but only as a temporary measure. The law of June 9, 1916, permits the royal authorities of that country to compel reference to arbitration of such disputes as involve matters of grave public concern. Such authority, however, continues only so long as the war in Europe lasts.

The compulsory investigation of labor disputes, incorporation or registration of associations of employees or employers, and the legal recognition of the collective agreement had already been secured by the Arbitration Act of August 6, 1915.[1] This act had originally been a compulsory arbitration law, but opposition on the part of both employers and employees had defeated it. A general strike early in 1916, following a protracted strike of four months in the mining and the iron and steel industries, and finally involving in the neighborhood of 70,000 workmen, forced upon the royal authorities the seriousness of the situation and resulted in the law of June, 1916.

Pending reference to arbitration under the new law, conditions of work, hours, and wages must continue unchanged, except, of course, so far as the parties themselves may agree. The determination of the court takes the form of a collective agreement, which becomes a definite legal contract of employment. It becomes, therefore, illegal to strike for determining the application or intent of a collective agreement. No agreement is to continue in force longer than three years, unless both parties stipulate otherwise.

As under the former law of August, 1915, fines ranging from 5 crowns ($1.34) up to as high as 25,000 crowns ($6,700) are assessable against an employer or workman who takes part in or assists in unlawful labor disputes.

The court established under the new law consists of a chairman and four associates, for the latter of whom alternates are also appointed. These associates represent equally the national associations of employers and employees, while the chairman is appointed by the Crown. If the parties in interest fail to appoint their representative, the Crown may act.

The usual court processes are observed by the arbitration body, witnesses are summoned and documents called for in the usual manner. If requested by either party, the proceedings may be behind closed doors.

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[1] See MONTHLY REVIEW, vol. 1, November, 1915, pp. 81-85.

STRIKES AND LOCKOUTS IN VARIOUS EUROPEAN COUNTRIES.

FRANCE.

STRIKES IN 1914 AND 1915.

In its March-April-May issue of 1916, the bulletin of the French Ministry of Labor gives the following statistics as to strikes in 1914 and 1915:

NUMBER OF STRIKES AND STRIKERS AND RESULTS OF STRIKES, 1914 AND 1915 BY INDUSTRY GROUPS.

Industry group.	Number of—				Number of strikers participating in strikes which were—					
	Strikes.		Strikers.		Successful.		Partly successful.		Without success.	
	1914	1915	1914	1915	1914	1915	1914	1915	1914	1915
Agriculture	29	4	3,297	329	847	200	2,018	39	432	90
Mining, forestry, and fishing	21	2	73,872	289	320	....	18,564	176	54,968	113
Quarries	13	....	1,253	....	103	....	415	....	735	....
Food products	23	7	3,251	223	440	61	1,595	94	1,216	68
Chemical industries	25	13	4,443	1,010	702	440	1,801	....	1,940	570
Printing, engraving, etc	11	3	624	426	94	....	514	340	16	86
Leather and hides	30	10	9,826	891	346	422	9,184	261	296	208
Textile industries	117	25	15,679	4,403	3,802	490	7,622	3,532	4,255	381
Clothing and cleaning	20	4	1,351	249	34	....	985	129	332	120
Woodworking (cabinetmaking)	22	1	1,209	90	289	90	245	....	675	....
Carpentry	20	....	3,686	....	88	....	1,690	....	1,908	....
Metal working	10	....	1,168	....	45	....	767	....	356	....
Iron and steel works	63	1	14,841	18	364	18	2,009	....	12,468	....
Earths and stones	20	1	1,677	23	705	....	416	23	556	....
Building	169	6	17,455	1,238	3,161	....	5,684	40	8,610	132
Transportation	79	21	6,934	172	1,765	291	3,330	40	1,839	907
Total	672	98	160,566	9,361	13,105	2,012	56,839	4,674	90,622	2,675

In 1914 a total of 672 strikes, involving 160,566 strikers and 3,654 establishments, and causing an aggregate loss of 2,187,272 working days, was reported, and in 1915 a total of 98 strikes, involving 9,361 strikers and 304 establishments, and causing an aggregate loss of 55,278 working days. For the year 1913, the corresponding figures were 1,073, 220,448, 8,479, and 2,223,781, respectively. (This is the only comparison with preceding years made in the bulletin.) The average number of days lost per striker was 13.6 in 1914 and 5.9 in 1915.

A majority of the strikes of 1914 and 1915 were caused by wage demands. Demands for higher wages caused 408 strikes, with 63,638 strikers, in 1914, and 67 strikes, with 7,281 strikers, in 1915. Demands for shorter hours of labor were the next frequent cause.

That the results of the strikes were much more favorable for the strikers in 1915 than in 1914 may be clearly seen from the following table.

RESULTS OF STRIKES, 1914 AND 1915.

Result.	1914				1915			
	Strikes.		Strikers.		Strikes.		Strikers.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Terminated successfully	129	19.2	13,105	8.2	23	23.6	2,012	21.7
Compromised	217	32.3	56,839	35.4	31	31.6	4,674	49.8
Failed	326	48.5	90,622	56.4	44	44.8	2,675	28.5
Total	672	100.0	160,566	100.0	98	100.0	9,361	100.0

STRIKES FROM THE BEGINNING OF THE WAR TO THE END OF 1915.

In a separate table the bulletin shows that during the first 17 months of the war (Aug. 1, 1914, to Dec. 31, 1915) a total of 116 strikes, involving 10,421 strikers, took place. Of this total, 18 strikes, with 1,060 strikers, broke out in the last 5 months of 1914 and 98 strikes, with 9,361 strikers, during 1915. Of the 116 war strikes, 100 lasted less than one week, 10 from 8 to 15 days, 3 from 16 to 30 days, and 2 from 31 to 100 days.

During the year 1914, 21 lockouts were reported, affecting 294 establishments and 1,706 employees. From the viewpoint of the employers 9 of these lockouts were successful, 11 were compromised, and 1 failed.

GERMANY.[1]

STRIKES AND LOCKOUTS, 1915.

Strike statistics for the year 1915 show a greater deviation from the figures for labor disputes during normal years than do those for the year 1914. The seven months of peace of 1914 accounted for the high total of labor disputes for that year. The figures for 1915, however, fall below those of any previous year reported. Only 141 labor disputes (137 strikes and 4 lockouts), affecting 185 establishments, of which 38 had to close down, and 12,866 striking workers were enumerated for 1915. The small extent of labor disputes of 1915, as compared with preceding years, may be perceived from the following table:

NUMBER OF STRIKING AND LOCKED-OUT WORKERS, 1899 TO 1915.

Period.	Strikers.		Locked-out workers.		Total number of striking and locked-out workers.
	Number.	Per cent.	Number.	Per cent.	
Average, 1899-1903	83,384	86.4	13,075	13.6	96,459
Average, 1904-1908	210,933	75.4	68,884	24.6	279,817
Average, 1909-1913	226,187	69.0	101,406	31.0	327,593
1914	58,682	61.7	36,458	38.3	95,140
1915	11,639	90.5	1,227	9.5	12,866

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[1] Reichs-Arbeitsblatt, 1916, No. 5. Berlin, 1916. Pp. 416 ff.

The statistics for the year 1915 are especially distinguished from those for recent preceding years by the relatively small proportion which lockouts form of all labor disputes. The number of workers locked out in 1915 formed only 9.5 per cent of the total number of workmen participating in strikes or lockouts.

As regards the results of labor disputes, as compared with preceding years, it is noteworthy that the figures show an increased tendency toward success for the workmen, as may be seen from the following table:

RESULTS FROM THE VIEWPOINT OF THE WORKMEN OF THE LABOR DISPUTES OF 1915.

Period.	Per cent of strikes.			Per cent of lockouts.			Per cent of strikes and lockouts.		
	Successful.	Partially successful.	Failed.	Successful.	Partially successful.	Failed.	Successful.	Partially successful.	Failed.
Average, 1899-1903	15.0	47.5	37.5	18.9	22.7	58.4	15.5	44.2	40.3
Average, 1904-1908	9.6	46.6	43.8	6.8	62.4	30.8	8.9	50.5	40.6
Average, 1909-1913	8.8	39.6	51.6	2.2	75.5	22.3	6.8	50.7	42.5
1914	14.9	46.6	38.5	.9	19.9	79.2	9.5	36.4	54.1
1915	13.2	47.2	39.6	....	94.7	5.3	12.0	51.7	36.3

The number of labor disputes in 1915 is too small to form a reliable basis for other comparisons than those made above.

STRIKES AND LOCKOUTS FROM THE BEGINNING OF THE WAR UP TO THE END OF 1915.

In addition to statistics of labor disputes for the year 1915, the Imperial Statistical Office has also compiled such statistics for the first 17 months of the war. The principal facts shown by these statistics, grouped according to industries, appear on the next page.

STATISTICS OF LABOR DISPUTES DURING THE FIRST 17 MONTHS OF THE WAR, AUG. 1, 1914, TO DEC. 31, 1915, BY INDUSTRY GROUPS.

Industry group.	Number of labor disputes.	Duration (days).	Number of establishments affected.	Number employed in the establishments affected.	Number striking or locked out.	Days lost by the striking or locked-out workers.	Number thrown out of employment, not including those striking or locked out.	Number of establishments affected which manufactured war materials.
	Strikes.							
Mining	24	80	25	19,474	5,713	15,784	844	1
Stones and earths	3	19	3	327	260	794	9	......
Metal working	10	48	10	1,481	243	914	8	4
Machinery	26	102	27	15,962	3,074	11,886	692	16
Chemical industries	1	1	1	153	11	11	....	1
Forest by-products	3	14	3	131	37	111	....	......
Textile industry	5	45	5	1,099	489	978	85	1
Paper	2	12	2	305	198	1,188	40	......
Leather	4	15	5	675	61	375	....	3
Woodworking	4	18	5	345	216	906	50	1
Food products	16	86	16	5,727	965	4,058	1,017	3
Clothing	2	2	2	114	35	35	....	......
Building	35	268	42	5,682	1,601	7,544	182	1
Printing, engraving, etc	1	87	1	220	7	609	....	......
Commerce	13	28	36	771	547	1,526	7	......
Transportation	10	36	15	357	207	833	6	......
Hotels, restaurants, saloons	3	18	6	115	43	360	....	......
Theaters	1	1	1	18	16	16	....	......
Total	163	880	205	52,956	13,723	47,928	2,940	31
	Lockouts.							
Machinery	3	21	3	1,284	1,165	1,813	....	......
Clothing	1	30	4	62	62	1,860	....	......
Total	4	51	7	1,346	1,227	3,673	....	......
All disputes during the first 17 months of the war	167	931	212	54,302	14,950	51,601	2,940	31
Disputes during 1915	141	863	185	48,356	12,866	45,511	2,372	25

CAUSES AND RESULTS OF LABOR DISPUTES DURING THE FIRST 17 MONTHS OF THE WAR, AUG. 1, 1914, TO DEC. 31, 1915, BY INDUSTRY GROUPS.

Industry group.	Number of labor disputes.	Cause of disputes.			Result of the disputes from the viewpoint of the workmen.		
		Wages.	Hours of labor.	Miscellaneous.	Successful.	Partly successful.	Failed.
	Strikes.						
Mining	24	23	8	1	4	10	10
Stones and earths	3	1	1	2	2		1
Metal working	10	7	4	1	5		5
Machinery	26	20	1	11	4	2	20
Chemical industries	1	1		1			1
Forest by-products	3	3		1		1	2
Textile industry	5	5			1	1	3
Paper	2	1		2	1		1
Leather	4	3		5		1	3
Woodworking	4	3		1		3	1
Food products	16	11	4	7	4	5	7
Clothing	2	2	1		1	1	
Building	35	35	2	12	5	9	21
Printing, engraving, etc	1			1			1
Commerce	13	12		3	3	2	8
Transportation	10	8	2	2	1	5	4
Hotels, restaurants, saloons, etc	3	2		2			3
Theaters, etc	1	1				1	
Total	163	138	23	52	31	41	91
	Lockouts.[1]						
Machinery	3					1	2
Clothing	1					1	
Total	4					2	2
All disputes during the first 17 months of the war	167				31	43	93
Disputes during 1915	141				24	39	78

[1] Causes of lockouts: Introduction of graded wages and continuance of overtime work; reduction of wages in force at time of lockouts; refusal to grant demands of workers; change of collective agreement—not separately reported.

In the above two tables the fact of the small extent of labor disputes from August 1, 1914, to December 31, 1915, is again confirmed. The total for the first 17 months of the war, 167 disputes, with 14,950 participating workmen, falls far below the lowest figures for the individual years since official strike statistics were first published. The extent of the labor disputes during the war appears to be still smaller if, in addition to the low number of disputes, establishments affected, and participating workmen, the relatively short duration of the disputes is considered. The total of 167 disputes during the 17 war months, with 14,950 participating workmen, had a total duration of 931 days. If the duration of the dispute is computed per striking or locked-out worker, it is found that each worker lost 3.45 days of work, while the average number of days of work lost during the 5-year period preceding the war was 34.16 per striking or locked-out worker. The total number of days lost by all workers participating in the disputes was 51,601, while the lowest number of days lost in any year since the publication of official strike statistics was 1,950,847, in 1902. The extent of the labor disputes computed in this manner is therefore only 2.65 per cent of the lowest extent in the 15 years preceding the war.

None of the disputes occurring during the war were large or sympathetic strikes or lockouts of the kind that may always be observed during years of peace. They were generally isolated and rather accidental differences, developing into labor disputes of small extent. For this reason, relatively few of the disputes were supported by third parties, i. e., only 22.8 per cent of all disputes and 23.9 per cent of all participating workers. In the last five years of peace, on the other hand, 74.9 per cent of all disputes with 87.3 per cent of all participating workmen were supported by trade organizations or other third parties.

The demands of the workmen which caused the labor disputes during the 17 war months were not much different from the demands made in peace times, as most of them (138 in 163 strikes) related to wages.

In the labor disputes of the first 17 war months 2,927 workers, or 19.6 per cent, participated in disputes which terminated with full success, 6,747, or 45.1 per cent, in disputes which terminated with partial success, while 5,276, or 35.3 per cent, participated in disputes which terminated as failures from the workmen's point of view. According to the average figures for the five years preceding the war, 6.8 per cent of the workers were fully successful in their labor disputes, 50.7 per cent partly successful, and 42.6 per cent failed of success. Therefore the workers were more successful in labor disputes during the war than in the preceding years of peace.

STRIKES AND LOCKOUTS, FIRST QUARTER, 1916 (PRELIMINARY STATISTICS).

During the first quarter of 1916 a total of 22 labor disputes, all of them strikes, were reported to the Imperial Statistical Office. These strikes involved 23 establishments and 2,969 striking workers. Their total duration was 167 days, or on an average 7.59 days per strike. Each striker lost 4.2 days, the total number of days lost by all strikers being 12,552. If these preliminary figures are added to the figures for the first 17 war months shown above, a total of 189 labor disputes, with 17,919 participating workers, is obtained for the first 20 war months.

GREAT BRITAIN.

LABOR DISPUTES, 1915.[1]

The number of labor disputes reported for the year 1915 was 674, involving 445,936 workers, with an aggregate duration of 2,969,700 days. The number of disputes is lower than in any of the four preceding years, while the number of employees affected and duration are each below those of the five preceding years. Each item is also below the yearly average for a nine-year period.

The following summary table gives the data relative to labor disputes for the years 1914 and 1915:

NUMBER OF DISPUTES, NUMBER OF PERSONS INVOLVED, AND AGGREGATE DURATION IN WORKING DAYS OF ALL DISPUTES IN PROGRESS, 1914 AND 1915, BY INDUSTRY GROUPS.

Industry group.	1914			1915		
	Number of—		Aggregate duration in working days.	Number of—		Aggregate duration in working days.
	Disputes.	Employees involved.		Disputes.	Employees involved.	
Building	177	37,670	3,199,426	61	15,388	129,600
Coal mining	158	271,242	3,718,387	77	296,004	1,643,700
Other mining and quarrying	19	1,438	62,696	5	785	10,200
Engineering	90	18,795	878,247	97	24,930	222,500
Shipbuilding	87	17,632	127,213	46	6,856	49,000
Other metal	58	14,456	298,550	44	12,478	67,900
Textile	97	22,248	765,088	67	33,472	382,200
Clothing	48	4,397	61,529	37	5,150	24,300
Transportation	58	13,546	93,128	78	25,111	158,900
Other industries, and employees of public authorities	207	47,105	707,073	162	25,702	281,400
Total	999	448,529	[1] 10,111,337	674	445,936	2,969,700

[1] The total includes the duration (200,000 working days) of the general strike in Dublin, but which is not distributed in the trade groups.

Except in a few cases, no data are available as to the causes or results of disputes. On January 1, 1916, there were 13 of these disputes still unsettled, among which is that of the 1,200 weavers who went out on August 25 for payment of standard list prices.

LABOR DISPUTES IN THE FIRST SIX MONTHS OF 1915 AND 1916.[2]

On the opposite page are given comparative statistics of labor disputes for the first six months of 1915 and of 1916.

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[1] Board of Trade Labor Gazette, January, 1916, p. 6.

[2] Board of Trade Labor Gazette, July, 1916, p. 255.

NUMBER OF DISPUTES, NUMBER OF PERSONS INVOLVED, AND AGGREGATE DURATION IN WORKING DAYS OF ALL DISPUTES IN PROGRESS, FIRST SIX MONTHS, 1915 AND 1916, BY INDUSTRY GROUPS.[1]

Industry groups.	January to June, 1915.			January to June, 1916.		
	Number of—		Aggregate duration in working days.	Number of—		Aggregate duration in working days.
	Disputes.	Employees involved.		Disputes.	Employees involved.	
Building	26	9,634	83,000	52	5,886	145,800
Coal mining	29	31,625	106,400	31	21,265	106,400
Other mining and quarrying	1	33	1,100	5	541	12,700
Engineering	58	18,675	184,600	36	15,705	121,300
Shipbuilding	27	3,210	26,200	6	896	5,500
Other metal	26	9,940	46,400	15	2,541	7,000
Textile	36	25,798	216,900	34	45,124	976,300
Clothing	24	3,316	14,800	17	5,962	27,700
Transportation	51	16,954	101,200	31	19,946	87,200
Other industries	82	16,451	170,400	73	16,112	338,700
Total	360	135,636	951,000	300	133,978	1,828,600

[1] The figures have been amended in accordance with the most recent information.

NETHERLANDS.[1]

The Central Statistical Bureau reports 250 strikes in the Netherlands during 1914, involving 13,953 strikers and 844 establishments. Of the total number of strikes reported, 165 involved an increase in wages, 31 related to a decrease in wages, 60 related to other wage questions, 51 related to demands as to hours of labor, 21 involved a demand for unionism, 31 related to reinstatement of discharged employees, 18 were in relation to shop rules, 36 involved questions of the contract of hire, and 60 related to miscellaneous demands. Strikes due to two or more causes are included under each cause. The strikers succeeded in 59 instances, were partially successful in 89, failed in 84, and concerning 18 disputes the result was unknown or doubtful. More than one-half, or 149 strikes, lasted less than one week.

EMPLOYMENT OF DISCHARGED SOLDIERS AND SAILORS ON THE LAND IN GREAT BRITAIN.

The problem of the employment of discharged soldiers after the war continues to be given attention by the British Government. The second report of the Departmental Committee on the Settlement and Employment of Sailors and Soldiers on the Land[2] has recently appeared. The first report, which was briefly summarized in the

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[1] Centraal Bureau voor de Statistiek. Werkstakingen en uitsluitingen in Nederland gedurende, 1914. The Hague, 1915. (Bijdragen to de Statistiek van Nederland, new series, No. 224.)

[2] Great Britain. Departmental Committee on the Settlement and Employment of Sailors and Soldiers on the Land. Part II of the final report of the Departmental Committee appointed by the president of the Board of Agriculture and Fisheries to consider the settlement and employment on the land in England and Wales of discharged sailors and soldiers. London, 1916. 39 pp.

April, 1916, issue of the Monthly Review, pages 11 to 13, dealt with the settlement and colonization of discharged sailors and soldiers on the land, and the second part takes up the question of their employment as distinguished from their settlement upon the land. The matter of the settlement of discharged sailors and soldiers was dealt with first because immediate action was considered necessary in order to acquire and equip land for that purpose. But as a comparatively small proportion of the men in question who desire occupation on the land can be settled immediately as small holders and as the great majority will have to earn their living by means of wage work, the problem of their employment is in reality the larger one. "For both alike we have to keep on the land those who were on it before, and to draw to the land those who were not on it before." The policy of settlement, for the carrying out of which the committee recommended an appropriation of £2,000,000 ($9,733,000) to be placed at the disposal of the board of agriculture, should be regarded, the report declares, "as a permanent system for providing an agricultural 'ladder' by which the industrious and enterprising laborer can obtain a small holding as the result of his industry and intelligence."

Three purposes underlie the investigations of the committee: (1) How to meet the probable shortage of agricultural labor at the end of the war; (2) how to defeat a serious amount of unemployment which may occur on demobilization; (3) how to extend and develop agricultural industry in the highest interests of the nation.

Addressing itself to the first problem, the committee estimated that about 320,000 men had left agricultural employment since the beginning of the war, an estimate which it was considered would be exceeded before the end of the war. Some of this number will undoubtedly return to agricultural pursuits. But the wastage of war and the desire to settle in town or to emigrate to the oversea dominions will considerably lessen the number who will return to agriculture. A shortage of at least 25 per cent is therefore estimated by the committee; that is, about 80,000 men.

To meet this shortage in agricultural labor, four courses are suggested: (1) To continue the employment of women and children, as during the war; (2) to employ more labor-saving machinery; (3) to attract to agriculture men who were not so employed at the outbreak of the war; (4) To reduce agricultural employment by putting more land down to grass.

The first two courses are dismissed as inadequate to meet the shortage, and, furthermore, "the use of child labor on the farm, whatever its justification during the war, ought not in the national interest to be continued permanently." Inasmuch as the putting down of more land for grass would curtail agricultural production, the final recourse in making up the shortage of agricultural labor after the war is to attract nonagricultural workers to the land. To do this, the committee considered it necessary to insure such workers a satisfactory wage, adequate housing accommodations, more of the amenities of community life, and reasonable prospects of improving their position in life. Absence of these conditions, the committee remarks, accounts for the decline in population in rural districts in recent years.

The committee was unable to come to any agreement as to how to secure a satisfactory wage for those discharged soldiers and sailors who might enter agriculture after the war. Although the question of a minimum wage was discussed, no definite recommendation was arrived at by the committee as a whole. Of the 9 members, 4 favored the establishment of a minimum wage, while 5 considered such legislation as uncalled for at the present time, "when the wages in the industry stand at a higher level than they have ever reached before."

In order to provide housing accommodation, the committee urged the enforcement of the act of August, 1914, which authorized the board of agriculture to advance large loans to local authorities and public welfare societies in agricultural districts for the purpose of erecting cottages and to enforce which no attempt had yet been made. If more houses were provided by the local authorities under this act, the so-called system of "tied" cottages would be less onerous. (This is a system by which farmers purchase or rent with their farms a number of cottages in which their employees are housed.)

The charging of an economic rent, the committee declares, would also tend to remove difficulties in the way of providing new cottages in the country district. The committee points out that the practice of letting good cottages at a nominal rent tends to keep the standard of wages low and to discourage building.

To meet the unemployment which may occur at demobilization, the committee recommended provision of relief work in the shape, for instance, of reclamation of waste lands and afforestation by the State and local authorities.

On the question of the extension and development of agricultural industry after war, the committee makes some striking recommendations. In order to bring more land under cultivation, it suggests the following measures as most worthy of consideration: (1) A guaranty by the State of a minimum price for home-grown wheat for a period sufficient to give confidence to the farmers; (2) an offer by the State of a bonus for each acre of permanent grassland brought under the plow and kept in a proper state of cultivation; (3) the imposition of import duties on agricultural produce sufficient to give the protection that is necessary to the farmer.

Lastly, the committee suggests the possibility of the establishment of new agricultural industries as, for instance, the sugar-beet industry, the increased growing of potatoes for the manufacture of industrial alcohol and starch on a large scale, and the cultivation and manufacture of home-grown tobacco.

In conclusion, the committee emphasizes the fact, in their opinion—

> that no large amount of new capital or labor can be attracted to the soil unless the armer has some security in the future for more stable prices for his chief products than have prevailed during the past 40 years. If agriculture were developed and put on a new and firm basis, it would employ many thousands of additional men. The resulting competition for labor would tend to maintain agricultural wages at least at their present enhanced level, and probably to raise them still further. If, however, during the period of development in the agricultural industry, there existed any serious unemployment in the country generally, owing to depression in town industries, agricultural wages might have to be maintained by legislation designed to insure that the agricultural laborer receives his due and proper share in the added prosperity of British agriculture.

There is a separate minority report which emphasizes principally the necessity of immediate action in putting in the form of law whatever recommendations may be acceptable so as to be prepared for the rush of unemployed when the war ends. The minority also recommends most strongly the establishment of a minimum wage.

The report closes with a memorandum on the reclamation of land.

SICKNESS INSURANCE IN FRANCE.

France affords a typical example of a system of voluntary State subsidized sickness insurance as distinguished from a compulsory State system such as prevails in Germany and Great Britain. The French system is an adaptation of the mutual benefit features of trade-unions and fraternal organizations to the needs of a nation-wide system of sickness insurance.

The mutual aid societies are the oldest and at the same time the most common institution in France for the collective assumption of the burden entailed by sickness, accident, or the infirmities of old age. They differ from the benefit societies in the United States in the fact that in France as in other European countries the Government has taken cognizance of their existence, has enacted special laws regulating their operation, has subsidized them, and has attempted to organize them in such a way as to provide a uniform system. Within the scope of these laws there is wide range for the operation of different ideas and objects, so that they retain their status as voluntary organizations, though granting of subsidies to societies conforming to certain standards naturally leads to the acceptance of such standards and a consequent narrowing of the range of variety in organization.

At present these mutual aid societies are regulated in their operations by the act of April 1, 1898, supplemented, as is the European practice, by a series of laws, decrees, and orders issued by different authorities in the Ministry of Labor and Social Welfare, which controls the application of the act. The present law defines mutual aid societies as provident societies which have one or more of the following objects: (1) To assure to their members and their families assistance in case of sickness, injury, or infirmity; (2) to provide pensions for retirement; (3) to contract for their members individual or collective insurance against death or accident; (4) to provide for the payment of funeral expenses; and (5) to make provision for aiding widows, orphans, and other dependents of deceased members. Establishment of trade courses, free employment offices, and insurance against unemployment are functions which may be added, but expenses incurred for them must be met by special contributions.

The law recognizes three classes of societies: (1) Free societies; (2) approved societies; and (3) societies recognized as institutions of public utility. Federations of these societies may be formed in order to distribute, if desired, expenses involved in supplying medicines, providing retirement pensions, travel benefits, relief of protracted cases of illness, and the maintenance of free employment offices.

To all these societies the State, the departments, or the municipalities may grant subsidies for their support, acquiring, in return, a certain amount of control over their operations. The principal distinction between these three classes of societies lies in the amount of subsidies granted and the degree of control exercised by the authorities. The free societies, by reason of not subjecting themselves to complete control, are not privileged to receive as large subsidies as the other associations. Societies recognized as institutions of public utility differ only slightly from the approved societies, and since 1903 have not been distinguished from them in the official statistical reports.

In the class of approved societies there has developed in recent years a group of societies known as pupil societies (*sociètiès scolaires*), comprised, as their name indicates, of school children.

Regulation under the law consists in inspection of the constitution and by-laws of the different societies, examination of their accounts, conditions of membership, amount and the application of contributions, manner of constituting retirement pensions, etc. Mortality and sickness tables are prepared for the mutual aid societies by the ministries of the Interior and Commerce, and the investment of their funds is also regulated by law.

All their books, registers, minutes of meeting, and other documents are open to the inspection of the department prefect, subprefect of arrondisements, or their representatives. These officers report to the Minister of the Interior, who submits annually to the President of the Republic a report on the operations of the mutual aid societies.

Furthermore, in order to facilitate the enforcement of the provisions of the law, a superior council of mutual aid societies is provided. This consists of 36 members, one-half representing the mutual aid societies, the other members representing the Senate, Chamber of Deputies, Council of State, the ministers of the Interior, Agriculture, Commerce, and Finance, the Academy of Moral and Political Sciences, the Superior Council of Labor, the Institute of French Actuaries, the Academy of Medicine, and the medical associations of France. All members are elected for four years, and serve without compensation. The principal duty of this council is to give advice concerning all regulations and other acts affecting the operation of mutual aid societies.

Two classes of members are provided for, participating and honorary. The former make the required contributions and receive the benefit payments from the societies, while the latter pay either a fixed contribution or make donations to the society without receiving any of its benefits. In case honorary members meet with reverses, they may be admitted as participating members.

The income for the payment of the various forms of benefits is derived from the dues of the members, gifts, legacies, and Government subsidies.

The membership of these societies is probably most largely recruited from the employed classes, although no recent statistics are available on that point. There is reason to believe, however, that in most instances the members are salaried persons, better paid skilled workers, and small farmers.

Compared with the population of France at the latest census years, the proportion of participating or active members, excluding the membership of the children's societies so as more accurately to segregate the employed classes, was as follows:

COMPARATIVE MEMBERSHIP OF MUTUAL AID SOCIETIES IN FRANCE AT THREE LATEST POPULATION CENSUSES, 1901, 1906, AND 1911.

Year.	Population at census year.	Participating members of mutual aid societies.[1]	
		Number.	Per cent of population.
1901	38,962,000	1,891,482	4.9
1906	39,252,000	3,290,875	8.4
1911	39,602,000	3,688,603	9.3

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[1] Does not include participating membership of children's or pupils' societies, numbering in the years above 448,331, 696,465, and 814,651, respectively.

The percentages shown in this table undoubtedly exaggerate the proportion of wage earners who are protected by sickness insurance in France in comparison with the population, as a large proportion included in the figures are professional or semiprofessional employees and the better paid commercial employees, as already indicated above.

The popularity of the voluntarily organized mutual aid society for assuming the risks of sickness among school children is perhaps somewhat surprising. Of the total membership (4,565,071) in 1912, 817,895, or approximately 6 per cent, were in the pupils' societies.

The series of tables on the extent and development of voluntary sickness insurance in France have been compiled from different sources not quite comparable in many ways. The data for the year 1912 have been taken from a recent number of the official bulletin of the Ministry of Labor and Social Welfare.[1]

The data for the series of years 1906 to 1911 generally have been taken from the statistical year book of France.

NUMBER AND MEMBERSHIP OF MUTUAL AID SOCIETIES FOR ADULTS AND PUPILS, DECEMBER 31, 1912.

[Source: Bulletin du Ministère du Travail et de la Prévoyance Sociale, Paris, 1916, vol. 23, p. 121.]

Class of societies.	Number of societies reporting on Dec. 31, 1912.	Number of honorary members.		Number of participating members.		Number of honorary and participating members.	
		Total.	Average per society.	Total.	Average per society.	Total.	Average per society.
Approved or recognized public welfare societies for adults	16,431	472,125	28	3,388,352	206	3,860,477	235
Approved or recognized public welfare societies for pupils	2,168	44,868	21	817,895	377	862,763	398
Free societies	2,641	35,851	14	358,824	136	394,675	149
Total	21,240	552,844	......	4,565,071	......	5,117,915	......

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[1] Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris, 1916. March-April-May. Vol. 23, Nos. 3-4-5, pp. 121-125.

RECEIPTS AND DISBURSEMENTS OF MUTUAL AID SOCIETIES FOR ADULTS AND PUPILS FOR THE YEAR 1912.

[Source: Bulletin du Ministère du Travail et de la Prévoyance Sociale, Paris, 1916, vol. 23, p. 122.]

Item.	Approved adult societies.	Approved pupils' societies.	Free societies.	All societies.
Receipts.				
Contributions of—				
Participating members	$7,747,214	$791,093	$1,277,719	$9,816,026
Honorary members	857,846	19,331	96,083	973,260
Fines and entrance fees	1,338,763	36,569	204,166	1,579,498
Subsidies	2,337,072	....	9,110	2,346,182
Donations and legacies	432,605	7,028	246,876	686,510
Interest on investments	2,434,552	66,859	353,265	2,854,676
Total	15,148,052	920,880	2,187,219	18,256,152
Disbursements.				
Expenditures on account of sickness	4,970,182	218,870	724,948	5,914,000
Pensions, allowances, etc	1,307,847	....	284,450	1,592,297
Funeral expenses	313,920	1,025	39,894	354,839
Aid to widows, orphans, aged persons, etc	757,294	....	110,270	867,564
Costs of administration	538,658	49,903	84,156	672,717
Miscellaneous expenditures	1,857,691	58,630	234,416	2,150,737
Deposits for retirement funds	1,084,379	530,079	6,984	1,621,442
Total	10,829,971	858,507	1,485,118	13,173,596
Assets	109,388,935	3,729,617	11,013,019	124,132,371

AVERAGE CONTRIBUTIONS, BENEFITS, AND ADMINISTRATIVE EXPENSES OF MUTUAL AID SOCIETIES, 1912.

[Source: Rapport sur les opérations des sociétés de secours mutuels pendant l'année 1912, Journal Officiel de la République Française, Jan. 23, 1916, pp. 85 ff.]

Item.	Approved societies granting—				Free societies granting—				Pupils' societies.
	Sickness benefits principally.	Sickness and retirement benefits principally.	Retirement benefits principally.	Other benefits principally.	Sickness benefits principally.	Sickness and retirement benefits principally.	Retirement benefits principally.	Other benefits principally.	
Contribution per participating member:									
Males	$1.92	$3.01	$2.01	$1.50	$2.89	$4.36	$9.66	$2.41	......
Females	1.44	2.40	3.08	.73	1.84	2.22	6.33	3.17	......
Children	.82	1.09	.78	3.28	.86	1.23	2.36	.69	$0.97
Expenditure for sickness relief per participating member	1.81	2.29	......	.16	2.81	2.73	......	......	.27
Expenditure per case of sickness	6.18	7.11	8.18	8.47	6.21	9.19	......	8.49	2.21
Medical aid	1.48	1.80	1.31	.67	1.16	1.64	......	.38	.04
Medicines, etc	1.50	2.05	......	.32	1.30	2.15	......	.13	.03
Pecuniary aid	3.19	3.26	6.86	7.48	3.75	5.40	......	7.98	2.14
Funeral benefits per deceased participant member	11.00	12.94	24.68	28.49	11.85	17.26	22.63	29.88	4.66
Aid to widows and orphans per member aided	20.51	13.56	56.40	39.69	15.23	9.13	26.31	89.09	......
Aid to aged or infirm persons per case aided	4.18	13.46	20.84	11.25	2.81	7.37	6.19	105.46	......
Administrative expenses per participating member	.10	.20	.15	.12	.12	.51	.52	.16	.06
Administrative expenses:									
Per cent of receipts	3.53	4.60	3.38	4.45	3.06	6.65	2.84	4.58	5.23
Per cent of disbursements	4.40	5.10	5.06	5.24	4.43	8.52	8.14	5.62	3.80

NUMBER OF MUTUAL AID SOCIETIES FOR ADULTS AND NUMBER OF PARTICIPATING MEMBERS, 1906 TO 1911.

[Source: Statistique Générale de la France, Annuaire Statistique, 1913, Paris, 1914, vol. 23, p. 120*.]

Year.	Number of societies.			Participating members on Dec. 31.						Assets, Dec. 31.		
				Approved societies.		Free societies.		All societies.				
	Approved	Free.	Total.	No. reporting.	Membership.	No. reporting.	Membership.	No. reporting.	Membership.	Approved societies.	Free societies.	Total.
1906...	13,575	3,224	16,799	13,080	2,876,234	2,992	414,641	16,072	3,290,875	$42,271,892	$9,472,779	$51,744,671
1907...	14,343	3,204	17,547	13,890	3,013,207	3,041	411,592	16,931	3,424,799	45,752,120	10,014,826	55,766,946
1908...	14,998	3,177	18,175	14,346	3,103,635	2,958	395,989	17,304	3,499,624	50,729,733	9,212,205	59,941,938
1909...	15,612	3,176	18,788	14,420	3,160,275	2,918	390,485	17,338	3,550,760	52,294,432	9,871,865	62,166,297
1910...	17,900	3,179	21,079	15,832	3,173,464	2,806	379,132	18,638	3,552,596	55,589,756	10,307,623	65,897,379
1911...	......	......	......	16,130	3,317,771	2,690	370,832	18,820	3,688,603	55,879,979	10,905,001	66,784,980

FINANCIAL CONDITION OF MUTUAL AID SOCIETIES FOR ADULTS, 1906 TO 1911.

[Source: Statistique Générale de la France, Annuaire Statistique, 1913, Paris, 1914, vol. 23, pp. 121* and 123*.]

Year.	Number of societies reporting on Dec. 31.	Membership on Dec. 31.		Receipts.			Disbursements.				Pension funds.
				Contributions of—							
		Honorary members.	Participating members.	Honorary members.	Participating members.	Other receipts.	Physicians' fees and medicines.	Funeral, widows' and orphans' benefits.	Deposits for retirement funds.	Administration, aid to sick members and children and miscellaneous disbursements.	
	Approved societies.										
				Dolls.	*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*	*Dolls.*
1906...	13,080	382,286	2,876,234	739,893	10,013,955	3,390,498	1,999,230	545,019	848,535	4,298,491	39,888,178
1907...	13,890	397,596	3,013,207	776,532	6,538,389	4,032,241	2,109,515	611,516	971,221	5,089,208	41,531,284
1908...	14,346	410,968	3,103,635	836,315	7,090,019	4,477,427	2,143,626	651,194	1,498,694	5,276,747	44,432,267
1909...	14,420	415,875	3,160,275	814,386	6,920,350	4,264,082	2,309,000	827,429	1,357,963	5,576,306	44,281,148
1910...	15,832	436,005	3,173,464	836,156	7,597,158	1,370,745	2,336,050	832,808	1,114,906	5,828,417	45,396,116
1911...	16,130	454,974	3,317,771	846,069	7,786,691	....	2,524,131	962,341	1,072,572	6,097,392	49,094,536
	Free societies.										
1906...	2,992	33,740	415,641	94,646	1,086,941	890,486	273,103	155,650	266,312	841,694	(1)
1907...	3,041	34,866	411,592	96,120	1,289,696	837,157	285,980	182,846	284,882	849,049	(1)
1908...	2,958	36,335	393,989	99,302	1,266,579	760,243	285,406	152,831	260,352	797,580	(1)
1909...	2,918	34,769	390,485	110,719	1,278,098	796,086	271,551	152,012	273,972	821,367	(1)
1910...	2,806	34,736	379,132	94,806	1,313,377	823,310	268,071	183,458	287,969	893,717	(1)
1911...	2,690	35,492	370,832	92,948	1,292,553	840,612	271,326	223,009	307,739	781,490	(1)

[1] The free societies have no special pension funds and are paying pensions out of their resources on hand.

SICKNESS AND MORTALITY STATISTICS OF MUTUAL AID SOCIETIES FOR ADULTS 1901 TO 1911.

[Source: Statistique Générale de la France, Annuaire Statistique, 1913, Paris, 1914, vol. 23, pp. 122* and 124.*]

Year.	Number of members over 55 years of age.	Cases of sickness.	Cases of sickness per 100 members.	Compensated days of sickness.	Compensated days of sickness per compensated case of sickness.	Deaths per 100 members.	Number of pensions awarded from the general pension fund up to Dec. 31.
	Approved societies.						
1901	241,796	396,743	32.20	5,440,762	21.4	1.52	46,077
1902	259,351	413,304	29.80	5,673,829	21.4	1.36	46,808
1903	290,824	426,430	29.20	5,878,991	22.2	1.38	48,315
1904	296,690	446,392	....	7,187,441	25.8	....	51,010
1905	317,020	497,759	....	7,254,003	22.1	....	53,128
1906	400,112	542,897	18.88	7,596,923	22.3	1.08	55,018
1907	481,695	551,803	20.21	8,419,575	23.9	1.30	56,732
1908	458,320	560,884	18.07	8,048,457	29.7	1.20	58,649
1909	504,957	615,272	19.46	8,599,282	21.9	1.30	60,014
1910	505,277	666,283	20.99	8,502,859	22.0	1.25	61,743
1911	....	731,040	....	9,132,803	24.6	....	63,113
	Free societies.						
1901	49,197	91,850	29.7	1,470,045	21.0	1.50	21,490
1902	51,205	94,711	27.8	1,453,968	19.4	1.34	[1] 9,677
1903	52,656	97,572	27.8	1,401,302	20.1	1.32	9,874
1904	52,483	99,550	....	1,456,935	20.0	1.23	9,124
1905	53,460	97,447	....	1,552,858	20.0	1.19	8,490
1906	52,827	98,835	23.8	1,598,240	20.3	1.30	8,875
1907	51,627	100,260	24.4	1,676,230	22.4	1.46	9,359
1908	51,448	96,864	24.5	1,549,404	20.4	1.38	8,811
1909	50,801	93,575	24.0	1,630,738	22.3	1.45	8,956
1910	50,018	100,139	26.4	1,478,640	21.0	1.43	8.926
1911	....	96,796	....	1,466,945	22.8	....	9,286

[1] Decrease due to change in status of one society with 12,320 pensioners from a "free" society to an "approved" society.

SOCIAL INSURANCE IN SWITZERLAND.

The subject of insurance in Switzerland is reported upon by the American consul at Zurich in a special dispatch under date of May 15, 1916.[1] Those paragraphs of the original manuscript relating to social insurance are as follows:

Dr. J. von Dymowski, in his doctor's thesis on old age and invalidity insurance in Switzerland, which was presented in 1914 at the University of Zurich,[2] has stated that up to February 4, 1912, the day on which the Federal law of June 13, 1911, providing for insurance against sickness and accident, was approved in referendum by the voters of Switzerland, there was no real social insurance in Switzerland. The provisions for social insurance that were in existence previous to that date were either such as were applicable only to certain classes of people or which were more or less locally restricted in their field of activity. Examples of the former were the compulsory factory liability law and the military insurance, and of the latter the mutual old-age, sickness, etc., insurance in certain Swiss Cantons.

The Federal law of June 13, 1911, mentioned above, provides for (I) optional sick insurance, which may, however, be made compulsory by the individual Cantons, and which operates through approved mutual sick insurance funds that are subsidized by the Federal Government, and (II) compulsory insurance against accidents that are incidental as well as also those that are not incidental to the operation of certain specified industries and occupations. This accident insurance is to be provided by the Swiss Accident Insurance Office in Luzerne, acting through its agencies in all parts of Switzerland and cooperating with approved sick insurance funds. The office provides also optional insurance for persons, the insurance of whom is not made compulsory.

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[1] This report has been printed in full in the Economic World, New York, June 24, 1916, pp. 825-828.

[2] Published by Rascher & Co., Zurich and Leipzig.

The premiums for the optional sick insurance are paid by the insured; those of the compulsory accident insurance that is incidental to the operation of the respective industries, are to be paid by the employers; three-fourths of the premiums for the nonincidental accident insurance and seven-eighths of that of the optional accident insurance are to be paid by the insured and the remainder in each instance by the Federal Government. As yet, however, only the part of the law providing for optional sick insurance has been in operation since January 1, 1914; it is reported that the part of the law concerning accident insurance is to be enforced on January 1, 1917, but the date has not yet been definitely announced by the Federal Council. Statistics covering the insurance in accordance with this law are of course not obtainable.

Through its law of June 28, 1901, which has been in force since January 1, 1902, Switzerland is doubtless the only country which has insurance specifically for its soldiers. The purpose of this is to insure the soldiers and other military persons against the industrial results of sickness and accident, incurred during military service. The insurance provides hospital treatment and sick benefits for temporary incapacity, invalidity pensions for more or less permanent incapacity, and burial expenses and annual pensions to the survivors in the case of death. Except in the case of sickness or accident that is incidental to military service performed exclusively for, or in the interest of, the individual Cantons, the Federal Government itself covers the entire cost of the military insurance, which, moreover, also provides satisfactory insurance to more than 15 per cent of the entire population of Switzerland.

During the years 1911 and 1912, the last for which these particular statistics are available, losses amounting to $244,688 and $262,524 were paid, respectively, to 5,906 and 6,035 insured persons and their survivors. Of these amounts $113,404 and $123,677 respectively, were in the form of hospital fees and sick benefits in the case of temporary disabilities and the balance in each case was paid in the form of invalidity pensions, burial expenses, and annuities to survivors, in the case of permanent disabilities.

In addition to the above-named social insurance under Federal control there are also two cantonal insurance organizations, the Social Insurance Fund of Canton Neuchatel and the Old-Age Insurance Fund of Canton Vaud. The former is a mutual organization with optional membership which was established by the cantonal law of May 15, 1906, and which enjoys a cantonal subsidy. It provides straight life insurance policies as well as mixed and annuity policies, and the following table represents the total business during the years 1912 and 1913:

OPERATIONS OF THE SOCIAL INSURANCE FUND OF CANTON NEUCHATEL DURING 1912 AND 1913.

Item.	1912	1913
Premiums received (approximate)	$171,770	$188,175
Losses paid (approximate)	$81,060	$85,885
Number of policies in force (approximate)	13,982	14,872
Amount of insurance in force	$3,651,560	$3,940,850

Of the total number of policies during the year 1913, 6,620 policies, representing insurance to the amount of $1,242,920, were straight life insurance policies, and 7,707 policies, representing $2,653,750, were mixed policies, and 545 policies, representing $50,180, were annuity policies.

The Old-Age Insurance Fund established in Canton Vaud by the law dated March 2, 1907, combines old-age insurance with various forms of savings deposits. The premiums or deposits may be either definite or provisional; the latter may be withdrawn within 10 years after payment. The principal purpose of this is to enable employers to provide old-age insurance for their workmen without being compelled to risk losing such payments in case of the premature death or disability of the insured. This insurance fund also makes special efforts to encourage deposits by women and children, especially school children. The cantonal government furthermore makes very liberal contributions to the premiums or deposits of citizens of the Canton, who are industrial tradesmen or workmen, whose annuities do not fall due before their 55th year, and whose annual premiums or deposits range from francs 6 ($1.16) and do not exceed francs 60 ($11.58).

The total number of the insured during the years 1912 and 1913 were 13,823 and 14,996; the total premiums received were $30,141 and $33,531, to which there is added $15,052 and $16,664, cantonal contributions, and the total payments to the insured amounted to only $470 and $724, respectively. The comparatively low payments are explained by the fact that the fund has been in existence but a short time.

Besides the above Federal and cantonal social insurance organizations there are also a large number of special funds for definitely restricted membership, such as the funds of the employees of the Federal railways and of the Post Office Department. The fund of the former, which was established in 1907 and in which membership is made compulsory to all able-bodied employees not over 35 years of age, provides insurance or benefits in the case of incapacity, sickness, and death. The contributions consist of membership fees, percentages of the employees' salaries, etc., on the part of the employees, and equal contributions on the part of the Federal railway management. During the years 1912 and 1913 the membership, total contributions of insured and management, and total benefits paid, were as follows:

MEMBERSHIP, CONTRIBUTIONS, AND THE BENEFITS PAID BY THE FEDERAL RAILWAYS FUNDS, 1912 AND 1913.

Item.	1912	1913
Membership	19,986	20,563
Contributions	$2,231,370	$1,428,721
Benefits	$884,442	$1,006,186

Insurance funds also exist for the cantonal official employees in a number of Cantons as well as also funds for municipal employees in some of the larger cities. The teachers' associations in many parts of Switzerland also maintain funds for the benefit of their members. The work of Doctor Dymowski furthermore lists 128 other local funds maintained by trades-unions, employees in certain factories and industrial establishments, etc., which during 1903—the last for which the figures are given—had a total membership of 57,962, made total collections to the end of that year amounting to $2,294,369 and total disbursements amounting to $649,266.

LEGAL AID BUREAUS IN GERMANY, 1914.

Although it is the duty of the various kinds of courts to grant legal protection to persons appealing to them for aid for specified claims or against specified violations of the law, it happens frequently that justified claims go without redress because they were not presented in proper form or because the person entitled to a claim is ignorant of his right. Moreover, ignorance of the law often causes discontent which might be avoided by proper legal advice to the discontented persons as to their rights. Persons of small means are, however, frequently not in a position to engage the services of a reputable lawyer or are afraid to take their case into court, and therefore fall into the hands of some unprincipled lawyer using unprofessional methods. To combat this evil free legal aid bureaus have been established in most civilized countries by the State, communes, or private associations, and it is a gratifying fact that in many instances the legal profession has taken an active interest in these bureaus, because they have become convinced that these bureaus do not divert paying clients from reputable lawyers, but merely protect people of small means from the extortions of unprincipled members of the legal profession.

The establishment and maintenance of legal aid bureaus has become one of the most important branches of social welfare work, and in no other country have such bureaus been established in such large numbers and done such efficient work as in Germany. According to the latest statistics on legal aid bureaus published by the Imperial Statistical Office[1] 1,027 of these bureaus existed in 1914 in Germany. They gave information or legal advice in 1,780,570 instances and in 459,765 instances prepared legal papers for persons seeking aid. The statistical office classifies the bureaus into the following 9 principal groups: (1) Communal or State bureaus; (2) bureaus maintained by public welfare associations; (3) bureaus for women; (4) bureaus maintained by workmen's organizations; (5) bureaus maintained by employers' organizations; (6) sectarian bureaus; (7) bureaus maintained by political organizations; (8) bureaus maintained by organizations of salaried employees; and (9) rural bureaus. The relative importance of the individual classes of legal aid bureaus and their development during 1914, as compared with 1909 and 1913, is shown in the table following.

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[1] Die Rechtsberatung der minderbemittelten Volkskreise im Jahre 1914. Sonderbeilage zum Reichs-Arbeitsblatte No. 5. Berlin, 1916. 30 pp.

WORK OF LEGAL AID BUREAUS IN GERMANY, 1909, 1913, AND 1914.

Class of bureaus maintained by—	1909			1913			1914		
	Number of—			Number of—			Number of—		
	Bureaus.	Times legal advice was given.	Legal papers prepared.	Bureaus.	Times legal advice was given.	Legal papers prepared.	Bureaus.	Times legal advice was given.	Legal papers prepared.
Communes or the State	101	248,621	40,348	144	387,764	58,777	158	336,653	57,412
Public welfare associations	28	134,870	25,401	36	207,753	38,546	35	201,375	35,424
Women	79	33,772	9,326	107	52,869	11,961	109	74,363	16,103
Workmen's organizations:									
Workmen's secretariates of free trade-unions	111	565,496	143,620	129	724,993	185,142	126	692,590	180,361
Bureaus of information of free trade-union cartels	172	40,226	1,869	232	52,670	18,027	180	42,221	15,953
Hirsch-Duncker trade-unions	44	32,982	6,548	60	61,966	11,977	58	51,245	8,972
Christian trade-unions	21	15,467	21,777	83	18,974	23,400	52	15,535	19,587
Independent trade-unions—									
Polish	8	12,659	8,372	13	28,073	16,913	15	23,563	14,646
Others	......	......	......	9	5,294	3,162	19	3,688	1,008
Nonmilitant trade-unions	2	1,413	527	28	27,654	11,778	19	15,696	6,148
Employers' organizations	5	3,600	1,130	13	13,905	5,320	12	10,207	4,599
Sectarian associations:									
Protestant	14	26,683	11,098	58	43,894	15,529	47	32,867	11,909
Catholic—									
General	117	275,466	93,638	134	258,313	102,451	105	193,846	73,972
Polish	......	......	......	19	10,735	6,913	19	10,080	5,964
Women and girls	......	......	......	10	3,899	1,344	7	5,890	1,521
Political organizations	11	10,261	3,607	25	18,611	8,421	21	8,936	3,839
Organizations of private salaried employees	......	......	......	42	62,528	1,661	44	61,815	2,347
Rural bureaus	......	......	......	1	2,710	......	1	......	......
Total	713	401,516	367,261	1,143	1,982,605	521,322	1,027	1,780,570	459,765

On account of the war, the number of legal aid bureaus, and the business transacted by them, slightly decreased in 1914. Nearly all the legal aid bureaus maintained by communes, the State, or public welfare societies, and some of the bureaus for women and bureaus maintained by employers' and salaried employees' organizations, belong to the Federation of German Public Welfare and Nonpartisan Legal Aid Bureaus, which represents its affiliated bureaus in all legal procedures at the Imperial Insurance Office. The federation issues a bulletin, "Die gemeinnützige Rechtsauskunft," and is the principal factor in the development of the legal aid bureau movement.

IMMIGRATION IN JUNE, 1916.

The number of immigrant aliens admitted into the United States during the first seven months of 1916 has been in excess of the number admitted during the corresponding months of 1915. There has also been an increase from month to month during the first five months of 1916. Compared with the preceding month, June shows a decrease of 0.8 per cent and July of 18.6 per cent. These facts are brought out in the statement following.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1914, 1915, AND 1916.

Month.	1914	1915	1916	Per cent increase over preceding month.
January	44,708	15,481	17,293	8.5
February	46,873	13,873	24,740	43.1
March	92,621	19,263	27,586	11.5
April	119,885	24,532	30,560	10.8
May	107,796	26,069	31,021	15.1
June	71,728	22,598	30,764	[1].8
July	138,244	21,504	25,035	18.6

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during June, 1915, and 1916, was as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, JUNE, 1915 AND 1916.

Race.	Admitted—		Departed—	
	June, 1915.	June, 1916.	June, 1915.	June, 1916.
African (black)	487	643	243	171
Armenian	41	106	152	1
Bohemian and Moravian	77	46	4	5
Bulgarian, Serbian, Montenegrin	258	305	59	3
Chinese	293	171	115	207
Croatian and Slavonian	78	33	8	2
Cuban	432	498	191	201
Dalmatian, Bosnian, Herzegovinian	4	4	....	....
Dutch and Flemish	288	615	76	94
East Indian	6	7	18	2
English	3,099	3,016	1,054	715
Finnish	368	459	79	96
French	889	1,893	300	361
German	1,034	841	72	69
Greek	998	3,791	519	107
Hebrew	811	1,292	57	13
Irish	2,648	2,123	236	160
Italian (north)	485	424	236	311
Italian (south)	2,358	5,374	3,570	650
Japanese	722	974	90	56
Korean	8	1	6	2
Lithuanian	36	39	16	....
Magyar	44	43	12	43
Mexican	1,076	1,070	14	45
Polish	229	460	153	31
Portuguese	848	715	40	62
Roumanian	37	74	3	9
Russian	308	319	846	546
Ruthenian (Russniak)	144	88	....	5
Scandinavian	1,875	1,811	353	639
Scotch	1,125	1,288	226	215
Slovak	12	15	19	11
Spanish	747	1,354	381	212
Spanish-American	199	267	61	51
Syrian	69	55	6	4
Turkish	21	38	8	3
Welsh	99	72	33	9
West Indian (except Cuban)	115	157	36	48
Other peoples	230	283	50	54
Not specified	....	....	1,488	1,148
Total	22,598	30,764	10,830	6,361

OFFICIAL REPORTS RELATING TO LABOR.

UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. Building Construction Bulletin No. 1 (revised). Construction Bulletin No. 7, on the handling and use of explosives. Sacramento, 1916.*

Building Construction Bulletin No. 1, revised, gives suggestions that have been embodied in previously issued illustrated bulletins, Nos. 1, 2, 3, 5, and 6, depicting the danger of accidents from the following causes: Flimsily constructed scaffolds, defective ladders, unguarded floor openings, protruding nails, and unsafe piling of material. Bulletin No. 7 contains 21 precautions to be observed for the prevention of powder explosion accidents. Each bulletin is in the form of a placard to be tacked up in a conspicuous place for the information of employees.

—— —— *Boiler Room Bulletin No. 1. Sacramento* [*1916*].

A bulletin in the form of a placard to be placed in the boiler room giving suggestions to promote safety in the operation of boilers.

—— —— *Bulletin No. 1, relating to safety and efficiency in mines, April 1, 1916.* [*Sacramento.*] *15 pp.*

Recites the causes of accidents from falls of rock and ore, and suggests the responsibility of operators and miners to prevent such accidents. Also tells how to prevent fires in mines and in this connection gives protective measures applicable to practically all mines. Concludes with suggestions to mine foremen.

MASSACHUSETTS.—*Bureau of Statistics. Sixth annual report on union scale of wages and hours of labor in Massachusetts, 1915. April 1, 1916. Boston, 1916. 103 pp. (Labor Bulletin No. 114; being part 2 of the annual report on the statistics of labor for 1916.)*

Shows time rates of wages and hours of labor prevailing in the principal organized trades in Massachusetts in 1915; the data pertain principally to October 1, 1915. Fifteen tables of the report relate to the following trades and services:

Building Trades.
Domestic and Personal Service.
Food, Liquors, and Tobacco.
Garment Trades.
Metals and Machinery.
Paper and Pulp Manufacturing.
Printing and Allied Trades.
Stone Working and Quarrying.
Teaming.
Telephone Service.
Theatrical Employment.
Woodworking and Upholstering.
Miscellaneous Trades.
Federal Service.
Municipal Service.

—— *State Board of Conciliation and Arbitration. Report for the year ending December 31, 1915. Public Document No. 30. Boston, 1916. 245 pp.*

A digest of this report appears on page 38 of this issue of the REVIEW.

NEW YORK.—*Bureau of Statistics and Information. New York labor laws of 1916.* [*Albany, 1916.*] *68 pp. (Department of Labor special bulletin, issued under the direction of the Industrial Commission, No. 78.)*

Contains the text of labor laws enacted by the legislature in 1915, and is preceded by a general summary review.

—— *Factory Investigating Commission. Fourth report, Appendix VIII, pp. 1845–2268. Minimum-wage legislation in Australasia, by Paul Stanley Collier. Albany, 1915.*

A review of this treatise appears on page 71 of this issue.

—— (NEW YORK CITY).—*Commission on Pensions. Report on the pension funds of the city of New York. Part II. An actuarial investigation of the mortality and service experience of the special and general service funds for municipal employees, including tables and diagrams on family history and a valuation of assets and liabilities. New York, 1916. xiv, 422 pp.*

The above report "contains the fundamental facts which are indispensable to the intelligent consideration of the city's existing pension plans, and upon which alone a sound, properly organized new pension system can be constructed. It represents the results of a complete actuarial investigation of the nine existing pension systems of the city of New York, and furnishes the first comprehensive data ever available with reference to these funds."

OHIO.—*Industrial Commission. Department of workshops and factories. Proposed rules relating to steel mills. Columbus, 1915. 14 pp.*

—— —— *Statement of the condition of the Ohio State Insurance Fund as of May 15, 1916. Statement showing the economic value of the Ohio State Insurance Fund to Ohio employers. [Columbus, 1916.] [4] pp.*

A summary of this report appears on page 60 of this number of the REVIEW.

—— —— *Program, Second Annual Industrial Safety Exposition of Ohio and Safety Conferences under the auspices of the Industrial Commission of Ohio. At Central Armory, Cleveland, Ohio, January 22 to 29, inclusive, 1916. Cleveland [1916]. 16 pp.*

TEXAS (DALLAS).—*First annual report of the Department of Public Welfare, 1915–16. [Dallas, 1916.] 88 pp.*

Reports the operations of the employment bureau through which 2,678 people were placed; the free legal aid bureau which handled 914 cases at a cost of a trifle over $1 per case; the social service bureau which ministered to 824 families; the municipal lodging house which in five months served 1,198 different men to whom 13,316 meals and lodgings were supplied for work and cash; special charitable organizations in the city; the municipal correction farm; the department of health; the park board; the board of education; and the censors of commercialized amusements, etc.

UNITED STATES.—*Congress. House. Committee on Interstate and Foreign Commerce. Bills affecting interstate commerce. Hearings before the Committee on Interstate and Foreign Commerce of the House of Representatives, Sixty-fourth Congress, first session, on H. R. 9047, 9132, 9216, 10485, 11243: Safety on railroads for passengers and employees, and hours of service and increase of pay of inspectors, April 18 to May 5, 1916. Washington, 1916. 247 pp.*

—— —— —— *Committee on the Judiciary. To authorize the working of Federal convicts upon public highways. Hearings before the Committee on the Judiciary. House of Representatives, Sixty-fourth Congress, first session, H. R. 5772, ser. 41, February 28, March 1 and 3, 1916. Washington, 1916. 43 pp.*

The purpose of this bill is to extend aid to the several States in the building of public highways and authorizing the working of certain Federal convicts upon such highways, or in the preparation of road material. At the hearings, there appeared on behalf of the bill the State highway commissioner of Virginia, the chief road engineer of West Virginia, and representatives of the American Federation of Labor.

—— —— *Senate. Committee on Education and Labor. Interstate commerce in goods manufactured by convict labor. Hearing before Committee on Education and Labor, United States Senate, Sixty-fourth Congress, first session, on S. 901. A bill to limit the effect of the regulation of interstate commerce between the States in goods, wares, and merchandise wholly or in part manufactured, mined, or produced by convict labor or in any prison or reformatory. Wednesday, January 19, 1916. Washington, 1916. 14 pp.*

Contains statement of Mr. Ralph W. Wheelock, of the Minnesota State Board of Control, in opposition to the bill, who represented that the enactment of the bill would unduly restrict the sale of binder twine and farm machinery manufactured by convict labor in Minnesota. Minnesota claims to have a model system for the employment of convicts, one feature of which involves making a proper charge for the wages of the convicts and prorating a certain portion so charged to the families of the prisoners.

UNITED STATES.—*Department of Commerce. Bureau of Corporations. Trust Laws and Unfair Competition. Washington, 1916. 832 pp.*

This report is designed to cover in compact form the laws of the various countries of the world pertaining to the prevention or regulation of monopoly by government; and the prevention of unfair practices of competition. Among the chief subjects discussed are Federal antitrust legislation, the judicial decisions thereunder, and the influence of such legislation on forms of business organization, the antitrust laws of the several States, the legislation of foreign countries with regard to combinations, and the laws and judicial decisions in the United States and foreign countries with regard to unfair and unlawful competition.

FOREIGN COUNTRIES.

FRANCE.—*Conseil Générale de la Seine. Rapport au nom de la commission mixte du travail et du chômage, relativement aux mesures à prendre pour procéder à l'organisation du travail au moment de la démobilisation, présenté par Henri Sellier et Émile Deslandres. Paris, 1916. 59 pp.*

A report of the mixed commission on labor and unemployment of the Department of the Seine to the General Council of the Department on measures to be taken after the conclusion of peace to find prompt employment for workmen-soldiers discharged on the demobilization of the French armed forces. The first part of the report describes the public efforts made in the Department of the Seine after the outbreak of the war to relieve unemployment, how pecuniary aid was given to the unemployed and their families, and how through the organization of a departmental employment office the relatively high rate of unemployment in the Department was reduced very considerably. Based on the experience acquired during the great economic crisis after the outbreak of the war, the report in part two makes recommendations as to measures to be taken at once to avert a crisis of like magnitude on the demobilization of the army. The measures recommended are: Organization of public aid, organization of the labor market, and creation of employment by means of public and departmental works, and by improvements in land and water transportation. In an appendix, Georges Limarchand submits a paper on the improvement of waterways in Paris and its suburbs.

—— *Ministère de l'Instruction Publique et des Beaux-Arts. Compte Rendu du Concours des Cités-Jardins, par Émile Cacheux, Délégué du comité de patronage des habitations à bon marché de la Seine. Paris, 1916. 15 pp.*

This is a reprint of an article which appeared in 1912 in the Bulletin of Economic and Social Sciences (*Bulletin des sciences economiques et sociales*) and describes and comments upon a competition of architects in laying out and constructing a model garden city for the Department of the Seine, which includes Paris. The author, M. Emile Cacheux, is a member of the Housing Committee of the Department of the Seine, one of the duties of which is to offer prizes to encourage the construction of low cost dwellings for women and men. (See Bulletin 158 of this Bureau, p. 132).

—— *Ministère du Travail et de la Prévoyance, Sociale. Direction du Travail. Travaux des Commissions Mixtes Departementales pour le maintien du travail national (année 1915). Vol. 1—Seine. Paris, 1916. 147 pp.*

In a circular letter of February 5, 1915, the minister of labor requested all prefects to organize departmental committees of representatives of employers and workmen, and of employer's and workmen's organizations for the discussion of problems relating to labor. These committees were to act as advisory bodies to the departmental authorities in manner similar to that of the Permanent Committee of the Superior Labor Council in its relation to the State authorities. The present volume contains the minutes of the sessions of the Departmental Committee for the Department of the Seine in which were discussed reports of subcommittees on unemployment and problems relating to employment, commerce, and apprenticeship.

GREAT BRITAIN.—*Board of Trade. Handbooks on London Trades. Clothing Trade. Part I, Girls. London, 1915. 52 pp.*

This pamphlet is one of a series of handbooks being prepared on behalf of the Board of Trade primarily for the guidance of members and helpers of advisory committees for juvenile employment in Greater London in connection with their work of advising boys and girls as to the choice of suitable employment. The pamphlet was written before the outbreak of the war and represents conditions prevailing in normal times. It describes briefly the method of entering, hours of labor, wages, qualifications necessary for applicants, suggested educational courses, opportunities for workers, and other general considerations in connection with the following clothing trades: Artificial flower making, boot and shoe trade, cap making, corset making, dressmaking, embroidery, millinery, silk hat making, tailoring, umbrella making, wholesale clothing trades, and wig making.

—— *Departmental Committee on the Settlement and Employment of Sailors and Soldiers on the Land. Part II of the final report of the Departmental Committee appointed by the President of the Board of Agriculture and Fisheries to consider the settlement and employment on the land in England and Wales of discharged sailors and soldiers. London, 1916. 39 pp.*

A summary of this report appears on pages 87 to 90 of this number of the REVIEW.

—— *Ministry of Munitions. Notes on the employment of women on munitions of war with an appendix on training of munition workers. London, 1916. 94 pp. Illustrated.*

This publication, issued by the Ministry of Munitions, Great Britain, is a photographic record, with brief written descriptions, of what is actually being done by women in munition factories on processes hitherto performed solely by skilled men, and is intended to "act as an incentive and a guide in many factories where employers and employed have been skeptical as to the possibilities of the policy of dilution." The volume is the result of visits of an expert engineer to workshops in various parts of the country where the dilution of skilled labor is in actual operation, and illustrates some of the operations which women, with the cooperation and assistance of the workmen concerned, are performing in engineering shops. There is included a brief appendix on training munition workers. (The "dilution" of labor refers to the introduction of unskilled and semiskilled workers in work where formerly all the operations were carried on by skilled workers.)

INTERNATIONAL ASSOCIATION ON UNEMPLOYMENT (FRENCH SECTION).—*L'Organisation Nationale du Placement à l'Étranger pendant la Guerre. Paris, 1916. 22 pp. (Circulaires du Secrétariat général. No. 36. July 1, 1916.)*

This is a reprint of an article by Edouard Fuster from l'Avenir, Paris, June, 1916, and is an account of the work of the national employment office systems of Great Britain and Germany during the period of the war.

INTERNATIONAL STATISTICAL INSTITUTE.—*Bulletin de l'Institut International de Statistique. Vienna, 1915. 3 vols.*

The first two volumes of this bulletin constitute the minutes and papers and discussion of the meeting of the International Statistical Institute held in Vienna, September 9 to 13, 1913, while the third part or supplement is an index of the first 20 volumes, which include the present work, of the bulletins of the International Statistical Institute. The delay in publication—a year and a half after the meeting in question—is explained by the Austrian committee in whose hands was placed the printing and publication of the minutes of this meeting, as due to a protracted strike which occurred in Vienna in the establishment which contracted to do the printing and also to the disorganization resulting from the European war. It may be noted that although printed in 1915, the volumes were not ready for distribution until 1916, through the firm of W. P. van Stockum & Fils, at The Hague, who are the publishers and sole distributors of the present volume of the bulletin. The papers and reports of the institute, which are contained in volume 2, appear in English, French, and German.

On March 15, 1915, the institute had 202 members, of whom 14 were honorary and 188 active. It may be noted in passing that the institute held its first session in Rome, April 12 to 16, 1887. The present session at Vienna in 1913 was the fourteenth. Only one session has ever been held in the United States, namely, the fourth, September 11 to 16, 1893, in connection with the World's Columbian Exposition.

ITALY.—*Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Previdenza. Provvedimenti in materia di economia e di finanza emanati in Francia in seguito alla guerra Europea. Part I: August 1, 1914, to July 31, 1915. Rome, 1916. 368 pp. (Annali del Credito e della Previdenza. Series II, vol. 11.)*

The present volume gives the text of all economic and financial measures—laws, decrees, ordinances, circular orders, etc.—enacted in France between August 1, 1914, and July 31, 1915.

JAPAN.—*Department of Finance. The Fifteenth Financial and Economic Annual of Japan, 1915. Tokyo. (No date.) vi [1], 202, [1], 3, [1], pp., diagrams, map.*

Among other matters contained in this volume are to be found statistics of factories classified by motive power, industries, etc.; Operatives classified according to occupation; Average daily wages of laborers; Index numbers of wages; Wholesale prices of principal commodities; Index numbers of prices of commodities; Number of cooperative societies, etc.

NETHERLANDS.—*Centraal Bureau voor de Statistiek. Beknopt overzicht van den omvang der Vakbeweging op. 1 Januari, 1915. (Bijdragen tot de Statistiek van Nederland, new series. No. 222.)*

Contains statistics of organized labor as of January 1, 1915. During the year the number of unions increased from 3,223 to 3,373, while the membership increased from 220,275 to 227,391. Classified according to a confessional or religious line of cleavage, it appears that the membership of the unions of that class increased 10.5 per cent, while the membership of unions not organized on a religious basis increased somewhat less than 1 per cent of the unions in existence on January 1, 1915, 2,149, with a membership of 149,101, or 65.57 per cent, were affiliated with some one of the 5 national federations, while the remaining unions were not so affiliated. The trade-unions of the Netherlands were organized in 156 federations, with 3,004 local sections (unions), and a total membership of 199,323, 24 national unions with a membership of 4,867, and 345 local unions with a membership of 23,201. Outside of these organizations, there were 634 workmen's associations, not classifiable strictly as trade-unions, having a membership of 75,721. The following table shows certain statistics of the trade-union movement in the Netherlands from 1911 to 1915:

MEMBERSHIP OF TRADE-UNIONS AND PER CENT OF SUCH MEMBERSHIP IN UNIONS AFFILIATED WITH THE CENTRAL FEDERATION OF LABOR, 1911 TO 1915.

Year.	Number of members in—				Membership affiliated with the central federations.	
	Protestant unions.	Catholic unions.	Nonsectarian unions.	All trade-unions.	Number.	Per cent.
1911	12,575	23,480	117,634	153,689	72,646	47.27
1912	13,090	25,758	130,296	169,144	82,570	48.82
1913	12,425	30,769	145,836	189,030	101,428	53.66
1914	14,812	37,498	167,965	220,275	137,893	62.60
1915	15,982	41,809	169,600	227,391	149,101	65.57

—— —— *Jaarcijfers voor het Koninkrijk der Nederlanden. Rijk in Europa, 1914. The Hague, 1915. li, 375 pp. Folded diagrams.*

This is a statistical yearbook of the Kingdom of the Netherlands in Europe, a separate volume appearing for the colonies each year. It contains, among other materials, factory inspection statistics, statistics of occupational diseases, hours of labor of child workers, wages and hours of labor, strikes and lockouts, collective agreements, trade-unions, retail and wholesale prices, social insurance, statistics of manufacture, etc.

—— —— *Werkstakingen en uitsluitingen in Nederland, 1914. The Hague, 1915. 60 pp. (Bijdragen tot de Statistiek van Nederland, new series, No. 224.)*

This volume contains statistics of strikes and lockouts in the Netherlands during 1914. A digest of the contents will be found on page 87 of this number of the Review.

New South Wales.—*Registrar of Friendly Societies. Friendly societies, trade-unions, building societies, cooperative societies, and transactions under the workmen's compensation act, 1910; report of the registrar for the year [1913–]1915. (Sydney, 1914–1916.) 3 vols.*

These volumes contain statistics and finances of the different mutual aid and benefit societies enumerated in the title.

The prosperity of all these associations is said to have been very adversely affected by the war.

The average membership, the amount of assets, State subsidies, and payments made for specified benefits are given in the table which follows:

STATISTICS OF FRIENDLY SOCIETIES IN NEW SOUTH WALES, 1905 AND 1910 TO 1914.

Year.	Membership (average).	Assets.	State subsidies.	Benefit payments.			
				Sick pay.	Funeral donations.	Medical attendance and medicines.	Total.
1905	101,463	$4,675,091		$427,186	$117,034	$489,414	$1,033,635
1910	149,579	6,911,136	$71,961	607,286	146,243	625,963	1,379,492
1911	164,910	7,333,027	84,424	723,045	186,674	696,104	1,605,823
1912	179,932	7,775,475	96,409	809,153	198,689	768,036	1,775,878
1913	188,590	8,266,816	100,814	844,099	223,625	830,196	1,897,920
1914	182,325	8,686,367	113,545	840,912	216,296	887,202	1,944,410

In the table following are shown the data relating to the membership of trade-unions, according to trade groups.

NUMBER OF TRADE-UNIONS AND MEMBERSHIP, 1914, BY TRADE GROUPS.

Trade group.	Number of unions.	Number of members.	Per cent members in each trade.	Assets.	
				Total.	Per member.
Building	20	22,685	9.5	$92,055	$4.06
Clothing	8	6,610	2.8	23,578	3.57
Engineering and metal working	18	19,243	8.1	96,517	5.01
Food, drink, and narcotics	25	18,244	7.7	41,949	2.29
Teaming, hauling, etc	9	6,365	2.7	15,831	2.49
Mining and smelting	23	26,857	11.3	212,213	7.91
Pastoral	5	22,941	9.6	74,248	3.24
Printing, bookbinding, etc	8	3,998	1.7	43,093	10.78
Railroads and street railways	8	47,018	19.8	112,402	2.39
Navigation and shipping	13	19,933	8.4	51,507	2.58
Manufacturing, not otherwise specified	21	14,363	6.0	69,703	4.85
Miscellaneous	47	29,457	12.4	59,902	2.03
Total	205	237,714	100.0	892,998	3.75

NEW ZEALAND.—*Department of Labor. Decisions under the worker's compensation act filed for the year 1915. Vol. 14. Wellington, 1916. xxvi, 37,* [6] *pp.*

NORWAY.—*Riksforsikringsanstalten. Aarsberetning nr. 19, 1915.* [*Christiana, 1916.*] *60 pp.*

Contains the report of 1915 of the State Insurance Institute of Norway which administers the various social insurance laws of that country.

SWITZERLAND.—*Schweizerisches Volkswirtschafts-departement. Berichte der schewizerischen Fabrik-und Bergwerkinspektoren über ihre Amtstätigkeit in den Jahren 1914 und 1915. Aarau, 1916. 174 pp.*

This volume contains the reports of the individual Federal factory and mine inspectors of Switzerland for the years 1914 and 1915. The factory inspectors' reports relate to general working conditions, workrooms, accidents and occupational diseases, their prevention and compensation, workmen's lists, shop rules, wage payment, and hours of labor, woman and child labor, enforcement of labor laws by the authorities, and welfare institutions in their individual inspection districts. Compilations of some of these statistics were made for all Switzerland. The compilations of accident statistics and of statistics of occupational diseases relate to 1913 and 1914, and summaries of the data presented are shown in the following two tables separately for factories and nonfactory establishments:

INDUSTRIAL ACCIDENT STATISTICS, 1913 AND 1914.

Item.	Factories.		Nonfactory establishments.	
	1913	1914	1913	1914
Number of workers employed	341,259	....	....	....
Industrial accidents causing—				
Temporary disability	22,737	16,283	15,874	11,478
Permanent disability	4	1	3	....
Death	104	58	102	96
Total accidents [1]	22,930	16,472	16,084	11,682
Compensation paid	$997,360	$650,417	$675,163	$446,762
Total number of days of partial disability	449,586	350,664	350,541	248,715

[1] The total includes all accidents reported during the year, inclusive of those whose result was not known when the present statistics were compiled.

STATISTICS OF OCCUPATIONAL DISEASES, 1913 AND 1914.

Cause.	Number of cases causing—								Total.	
	Partial disability.				Permanent disability.		Death.			
	1913		1914							
	Cases.	Days lost.	Cases.	Days lost.	1913	1914	1913	1914	1913	1914
Lead and its compounds	44	1,999	22	739	1	....	....	....	45	22
Mercury	....	....	2	15	....	....	....	....	....	2
Pentachloride of phophorus	2	203	....	....	....	....	....	....	2	....
Bichromate of potassium or sodium	3	78	1	28	....	....	....	....	3	1
Chlorine	3	47	3	68	....	....	....	....	3	3
Hydrochloric and hydrofluoric acid	1	64	4	104	....	....	....	....	1	4
Sulphurous acid	1	26	....	....	....	....	....	....	1	....
Nitrous gases	....	....	3	75	....	....	....	1	....	4
Sulphureted hydrogen	2	30	....	....	....	....	....	....	2	....
Carbon monoxide and carbonic acid	6	110	2	22	....	....	1	1	7	3
Phosgene	1	23	....	....	....	....	....	....	1	....
Methyl bromide	....	....	1	42	....	....	....	....	....	1
Benzine	....	....	1	12	....	....	1	....	1	1
Nitrobenzol	4	172	....	....	....	....	....	....	4	....
Aniline	4	48	2	125	....	....	....	....	4	2
Phenylhydrazine	2	113	1	26	....	....	....	....	2	1
Carbolic acid	....	....	1	17	....	....	....	....	....	1
Total	73	2,913	43	1,273	1	....	2	2	76	45

The report of the mine inspectors relates to the years 1914 and 1915, and deals with general conditions in the mining industry, mine accidents, and the enforcement of labor laws. At the end of 1915, 57 mines with 894 workmen were in operation. The accident statistics are compiled by kind of mineral mined, and the total results are the following:

	1914.	1915.
Accidents causing partial disability:		
Cases	62	32
Days lost	885	692
Accidents per 1,000 workers	69	36
Days of disability per accident	14	21
Days of disability per workman	1	0.8
Amount of compensations paid	$974.55	$627.83

OFFICIAL PERIODICAL PUBLICATIONS RELATING TO LABOR.

LABOR DEPARTMENTS AND BUREAUS.

CANADA.—*The Labour Gazette issued by the Department of Labor by order of Parliament. Ottawa, July, 1916.*

Industrial conditions during June, 1916; Proceedings during June under the Industrial Disputes and Investigation Act; Trade disputes June, 1916; Reports from employment offices; Immigration and colonization; Wholesale and retail prices, 1915 and June, 1916; Fair wages schedule in Government contracts, June, 1916; Recent industrial agreements; Industrial accidents, June, 1916; Annual convention of the Canadian Manufacturers' Association; The effect of the war upon the prices of bread; Report of the Mayor's Committee on Unemployment; Report of the Ontario Workmen's Compensation Board, 1915.

DENMARK.—*Statistiske Efterretninger udgivet af det statistiske Department, Copenhagen, July 6, 1916, (vol. 8, No. 10).*

Crop conditions on July 1; Displacement of population at the census of 1916; Unemployment, April, 1916; Retail prices, June, 1916.

FRANCE.—*Bulletin du Ministere du Travail et de la Prèvoyance Sociale, Paris.*

March–April–May, 1916 (vol. 23, Nos. 3, 4, 5).—France: Activities of the mixed departmental commissions on national labor; Strikes, March and April, 1916; Coalmine labor, February and March, 1916; Production of and commerce in coal, 1914 and 1915; Strike statistics for 1914 and 1915; Report on subsidies granted to unemployment funds in 1914; Mutual-aid societies in 1912; The national unemployment funds (Paris, and suburbs of Paris); Reports from the central and departmental employment bureaus; Minimum-wage rates established under the law of July 10, 1915; Economic index numbers, first quarter, 1916; Laws and decisions of courts relating to labor. Foreign countries: *Germany*—Review of the labor market, January and Feburary, 1916; Cost of living in Berlin, January and February, 1916; General results of workmen's insurance, 1913. *Austria*—Employment; Unemployment among trade-unions, October to December, 1915. *United States*—Working conditions of women and children in American industries. *Great Britain*—Labor market, February and March, 1916; Strikes in February and March, 1916; Statistics of labor exchanges. *Norway*—Factory law, September 18, 1915. *Miscellaneous*—Industrial and commercial conditions in Paris, second half of 1915; French exports and imports first four months, 1915 and 1916; Wholesale prices, March–April, 1916; Official decrees, orders, and documents.

GERMANY.—*Reichs-Arbeitsblatt, herausgegeben vour Kaiserlichen Statistischen Amte, Abteilung fur Arbeiterstatistik. Berlin.*

(The April, 1916, number has not been received by the Bureau.)

May, 1916.—Labor market in Germany, April, 1916; Labor market in foreign countries (Great Britain, Switzerland, Sweden, Canada); State of employment in

Germany in April, 1916, according to reports from various industries and from sick funds; Unemployment in German trade-unions, April, 1916; Unemployment in the Netherlands, February, 1916; Labor market in Germany, middle of April to middle of May, 1916, according to reports of free employment offices; Activities of free employment offices, April, 1916; War measures within the sphere of workmen's insurance; Wages of women and children in New Orleans; Wage statistics of the local sick funds of Magdeburg and Dresden; Working conditions in German potash mines; Strikes and lockouts in Germany during 1915 and since the outbreak of the war; Decisions of industrial courts; Statistical tables of the labor market.

Supplement: Statistics of legal aid bureaus for people of small means, 1914.

ITALY.—*Bollettino dell' Ufficio del Lavoro. Ministero di Agricoltura, Industria e Commercio. Rome. (Semimonthly.)*

June 16, 1916.—Labor market, by localities and industries; Employers' and employees' organizations; Congresses and conventions; Retail prices and index numbers of foodstuffs in Italian cities, first six months 1914 and April, 1916; Labor disputes in Italy, second half of May; Activities of the labor office; Activities of the provincial labor office in Udine, 1915; Experiments as to the effect of high pressure in labor under water; New system for direct moistening of the warp on the loom; Insurance against occupational diseases through the workmen's compensation act in Victoria (Australia); Court decisions affecting labor.

July 1, 1916.—Labor market, by localities and industries; Labor disputes in May and first half of June, 1916; Employers' and employees' associations; Congresses and conventions; Royal decree, June 22, 1916, creating a ministry of industry, commerce, and labor; Activities of the labor office; Publications of the labor office (strike statistics of Italy, 1913); Occupational diseases caused by dust, benzine, and benzol poisoning; Toxicity of methyl alcohol; Court decisions affecting labor.

July 16, 1916.—Labor market, by localities and industries; Employers' and employees' organizations; Wages and hours of labor in metal-working industries during 1915; Congresses and conventions; Retail prices and index numbers of foodstuffs in Italian cities, first six months 1914, and May, 1915 and 1916; Retail prices of foodstuffs in foreign countries—Great Britain (increase in June, 1916, over July, 1914); Germany, Berlin (increase in April, 1916, over July, 1914); Austria, Vienna (increase in April, 1916, over July, 1914); Labor disputes, second half of June, 1916; Meeting of the Permanent Committee on Labor, July 10 and 11, 1916; Appointments of presidents and vice presidents of industrial courts; Industrial accidents caused by machinery in the State of New York during 1911–1913; Purification of the waste water of glue factories; Apparatus for the purification of waste water in wool washing establishments.

NETHERLANDS.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague.*

June, 1916.—Review of the labor market (building trades, clothing, cleaning and laundries, and coal mining), May, 1916; Employment of fishermen, dock workers and interned soldiers, June, 1916; Employment in brickyards during the winter of 1915–16; Unemployment and unemployment insurance, May, 1916; Amendment of the State budget as to unemployment insurance; Reports from employment exchanges, May, 1916; Strikes and lockouts, May, 1916; Labor conditions on public works, June, 1916; Collective agreements, etc.; Trade-union reports, number organized, disbanded, etc.; Prices (wholesale and retail), June, 1916; Maximum wholesale and retail prices established by the Ministry of Agriculture, Industry and Commerce, June, 1916; Passports issued, May, 1916; Court decisions affecting labor; Miscellaneous reports of social and economic import; Prices in foreign countries (Australia, Canada, Denmark, Germany, Finland, Great Britain and Ireland, Italy, Norway, Austria, Switzerland, Sweden); War measures in foreign countries; Industrial conditions in foreign countries; Statistical tables on the labor market, housing and building inspection, occupational diseases, and State finances; Laws, regulations, ministerial orders, etc.

NEW SOUTH WALES.—*The New South Wales Industrial Gazette issued by the Department of Labor and Industry. Sydney.*

May, 1916 (vol. 10, No. 1).—The industrial situation, April, 1916 (minimum wages, prices, employment, strikes, etc.); Labor legislation; Workmen's compensation; Court decisions affecting labor; Reports of the factory inspector; Industrial registrar; Labor exchanges, etc.; Reports of the wages boards; Industrial agreements and arbitration awards; Labor exchange settlement No. 14.

NEW YORK.—*The Bulletin issued monthly by the New York State Industrial Commission. Albany.*

July, 1916.—Reports of minutes of meetings of the Industrial Commission; Cases before the legal bureau; New rule 4 (specifications of fire escapes accepted as required means of exit); The workmen's compensation law applied to municipalities, with advantages offered by the State insurance fund; Proposed general safety conference in New York under the auspices of the commission; Workmen's compensation cases; Accident prevention; Report of the Bureau of Mediation and Arbitration; The labor market; Reports from the Bureau of Inspection.

NEW ZEALAND.—*Journal of the Department of Labor. Wellington.*

June, 1916.—The labor market; Reports from the women's employment offices; Recent legal decisions (also what decisions affect labor in Great Britain); Statistical: Persons assisted to employment, May, 1916; Cooperative works in New Zealand; Current retail prices, May, 1915; Trade-unions registered, etc.

QUEENSLAND.—*The Queensland Industrial Gazette. Brisbane.*

June 10, 1916 (vol. 1, No. 4).—The labor market; Reports of the labor exchanges; Recent legal decisions and arbitration awards; Factory accidents occurring since May 1, 1916; Prices fixed by the Central Sugar Cane Prices Board and by the Control of Trade Board; Trade agreements, etc.

SPAIN.—*Boletin del Instituto de Reformas Sociales. (Publicacion Mensual.) Madrid.*

June, 1916 (vol. 13, No. 144).—Reports from the office of the secretary and technical divisions; Strikes; Cost of living; Congresses and conventions; Labor legislation; Report from foreign countries (strikes and lockouts in France and Great Britain); Labor legislation in Uruguay.

SWEDEN.—*Sociala Meddelanden utgivna av K. socialstyrelsen, Stockholm.*

No. 6, 1916.—The labor market, May, 1916: Establishment of a State unemployment commission; Subsidies to Government employees during the war; Investigation of the housing conditions of people of small means in Norrköping; Report of the commission on materials of construction; Development of public employment offices; Royal decree, May 19, 1916, providing for State aid to indigent unemployed; Royal decree, May 19, 1916, amending the ordinance, June 1, 1912, as to aid to the wives and children of conscripts; Law, May 30, 1916, establishing maximum war prices; Law, June 9, 1916, regulating the disposition during the war of specified property; Law on compulsory arbitration in Norway; Strikes and lockouts in Sweden, first quarter, 1916; Industrial accident statistics, 1910, 1911, and 1912; Reports of the factory inspectors on serious industrial accidents; Miscellaneous notes relating to labor in Sweden and foreign countries; Statistics of public employment offices in Sweden, May, 1916; Retail prices and cost of living in Sweden, 1905, to May, 1916; Live stock prices in Sweden, 1905, to May, 1916; Live stock supply and estimated consumption at public slaughterhouses, May, 1916; Fish prices in Stockholm and Gottenborg, May, 1915, to May, 1916.

MISCELLANEOUS.

ITALY.—*Bollettino della Emigrazione. Commissariato della Emigrazione. Rome. (Monthly.)*

May 15, 1916.—Statistics of Italian transoceanic emigration, first four months, 1916; Suspension by Austro-Hungarian accident insurance institutes of payment of pensions to Italian subjects injured in accidents in Austria-Hungary; Savings of Italian emigrants transmitted to Italy in 1915 through the Bank of Naples; The compensation law of the State of New York; Decision of the court of appeals of Naples in the matter of the obligation of licensed steamship companies to complete their contracts of transportation of Italian emigrants repatriating; Monthly statistics of transoceanic emigration from Italian ports, April, 1916; Current news relating to emigration and labor in foreign countries; Financial statement of the administration of the emigration fund for the fiscal year 1915–16; Safety regulations for steamers carrying emigrants; Decree, April 6, 1916, creating a special fund for the relief of unemployment and of Italian subjects whose accident pensions due from enemy countries were suspended; Circular letter of the minister of war relating to subsidies for dependents residing abroad of volunteers serving in the Italian army; Current publications relating to emigration and labor.

—— *Bollettino dell' Ispettorato dell' Industria e del Lavoro. Ministero de Agricoltura, Industria e Commercio, Ufficio del Lavoro. Rome. (Bimonthly.)*

November-December, 1915.—Personnel of the inspection service; Activities of the inspectors during November and December, 1915; Administrative orders; The writing and printing ink industry in Lombardy and Venice; Fatal accident caused by an electric current; Production in 1915 of Italian wool-combing establishments, and new establishments erected.

SPAIN.—*Boletin del Consejo Superior de Emigracion. Madrid. Abril, 1916 (Num. 82); mayo–junio, 1916 (Num. 83).*

RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

Alliance Employment Bureau, New York City. Inquiries into trades for factory workers. Sample mounting and sample case making, perfumery trade, paper-box making, candy trade, case making for jewelry and silverware. 1913. 29 pp. Inquiries into trades for industrial art workers. Air brush work, novelty painting, costume illustration. 1913. 19 pp. Inquiries into trades for boys. The blue-print trade. 1916. 8 pp.

This bureau is affiliated with settlements and other organizations. These inquiries were made to learn whether it was desirable for the bureau to place workers in the branches of employment named.

—— *Annual reports, 1913–1915. 3 vols.*

American cloak and suit review. Directory of women's wear manufacturers. No. 10. Spring ed., New York City, 1916. 240 pp.

American Federation of Labor. Iowa branch. Official labor directory, Des Moines, 1916. 192 pp.

A list of national and international unions of the United States and Canada, with names and addresses of secretaries of local unions in Iowa. Also contains proceedings of the 24th annual convention of the Iowa State Federation of Labor, at Marshalltown, June 13–16, 1916.

Baty, T. Vicarious liability. Oxford, Clarendon Press, 1916. 244 pp.

A short history of the liability of employers, principals, partners, associations, and trade-union members, with a chapter on the laws of Scotland and foreign States.

Bitting, A. W. Canning and how to use canned foods. Washington, D. C., National Canners' Association, 1916. 184 pp.

Contains a description of methods employed in modern canning and a brief outline of proper sanitary measures for canneries.

Blackford, Katherine M. H., M. D., and Arthur Newcomb. Analyzing character, the new science of judging men; misfits in business, the home and social life. New York, Review of Reviews Co., 1916. 488 pp.

Treats of analyzing character in vocational guidance, in selection of employees, and in persuasion. Has a section on principles and practice of character analysis and an appendix on requirements of the principal vocations.

Chance, Lady. Housekeeping on 25 s. [$6.08] a week or under. Published by the National Food Economy League. London. 16 pp.

Clearing house for employment. Atlanta, Ga. First annual report . . . year ending April 30, 1916. 14 pp.

An account of the fiscal year's work by the first public employment bureau operated in Georgia.

Cleveland Chamber of Commerce. Report of committee on industrial welfare. Industrial profit sharing and welfare work. April 10, 1916. 85 pp.

Summarizes in concrete form the plans and methods in use by 27 companies conducting profit-sharing schemes and 23 companies doing industrial welfare work.

Compton, Wilson. Wage theories in industrial arbitration. 1916. pp. 324–342.

Originally printed in the American Economic Review, Vol. VI, No. 2, June, 1916.

Confederation generale du travail. Conference of delegates from the general federations of trade-unions of the allied countries . . . June, 1916. London, Cooperative Printing Society (Ltd.), 1916. 15 pp.

An historical survey of the efforts to coordinate and nationalize labor legislation.

Cowee, G. A. Practical safety methods and devices, manufacturing and engineering. New York, Van Nostrand, 1916. 434 pp.

Intended to provide for employers, superintendents, foremen, underwriters, safety inspectors, and engineers generally, a convenient summary of standard safety methods and devices as developed and perfected by those who have specialized in this subject. Contains 127 illustrations.

Davenport, Daniel, General Counsel, American Anti-Boycott Association. An analysis of the unanimous decision of the Supreme Court of Massachusetts, declaring the anti-injunction law unconstitutional. New York. 15 pp.

Davison's textile blue book of the United States and Canada. 1916.

A directory of all textile manufacturers, dyers, finishers, etc., together with other trade information, such as date established, capital invested, and number of employees.

Farnam, H. W. The Seamen's Act of 1915. Washington, 1916. 16 pp. (Senate Document 333, 64th Congress, 1st session.)

An address delivered at the ninth annual meeting of the American Association for Labor Legislation, Washington, D. C., December 28, 1915.

Farrar, F. A. Factories and great industries. Cambridge (England), University Press, 1916, 90 pp.

A popular account of the textile industries, printing, and the making of paper, leather, and straw hats. Also treats briefly of trade-unions, old-age pensions, State insurance, and the relief of distress.

General Federation of Trade-unions. 17th annual report. London, 1916. 45 pp.

This federation had a membership of 1,076,634 for the fiscal year ended March 31, 1916, a decrease of 9,757 from the preceding year. The total income for the fiscal year was £70,391 10s. 7d. ($342,560.38). The total expenditure was £11,122 6s. 2d. ($54,126.71), of which £7,437 10s. 10d. ($36,194.80) was for federation benefit, the latter showing a decrease of £12,279 3s. 8d. ($59,756.65) from 1914–15. There were 176 industrial disputes, involving 15,510 members. During the year the Amalgamated Society of Engineers, with a membership of 154,350, seceded from the General Federation of Trade-unions, for the ostensible reason that there was an excess of contribution over money benefits received.

Greenwood, John H. A handbook of industrial law. London, University of London Press, 1916. 288 pp.

Intended as a practical legal guide for trade-union officers. It contains chapters on the legal position of trade-unions, national health insurance, unemployment insurance, and workmen's compensation.

Hollingsworth, H. L. Vocational psychology, its problems and methods. New York, Appleton, 1916. 308 pp.

A study of the various methods now used in selecting a vocation. Deals with character analysis, ways of selecting employees for different kinds of work, the use of psychological tests, and the value of impressions based on physical appearance, letters of appreciation, judgment of associates, self-analysis, etc. The volume includes a discussion contrasting the vocational fitness of men and of women.

How to manage men. Chicago, A. W. Shaw Co., 1914. 64 pp.

Presents the ideas and methods which 24 factory managers have proved in their work. Has suggestive chapters on getting shop cooperation, handling the wage question, shop discipline, winning department interest, and showing employees how to work.

International Harvester Company. Employees' Benefit Association. 7th annual report, 1915.

Janes, G. M. The control of strikes in American trade-unions. Baltimore, Johns Hopkins Press, 1916. 131 pp. (Johns Hopkins University studies . . . series 34, No. 3).

The purpose of this study is to describe the control of strikes exercised by general or national unions. It discusses the development of control, the part taken by the national agent or deputy, the influence of arbitration, the initiation of strikes, the independent strike, the management of strikes, strike benefits, and the methods used in bringing a strike to an end.

Lakeside Press. Schools for apprentices. The school for apprentices of the Lakeside press. . . . Chicago, Donnelly, 1916. 39 pp.

London. City and guilds of London institute. Report, 1916. 112 pp.

This institute conducts extensive courses of instruction in mechanical and electrical engineering, chemistry, applied art, and the skilled trades and occupations.

Maynard, Edith L. Women in the public health service. London Scientific Press. 1915. 128 pp.

McKendrick, A. Back injuries and their significance under the workmen's compensation and other acts. New York, Wood, 1916. 173 pp.

Minneapolis Civic and Commerce Association. 4th annual report, 1915. 155 pp.

Contains committee reports on housing, industrial development, industrial welfare, and unemployment.

Modern Hospital, The. Industrial welfare number. St. Louis, August, 1916. pp. 87–184.

An interesting number of this monthly periodical, giving articles and editorials relating to the subject of industrial welfare and many "stories" from various industries relating to welfare work.

National Association of Corporation Schools—Advance copy. Report of Committee on Vocational Guidance. The organic development of business. 1916. *148 pp.*

This report is an attempt to set forth what employee, employer, and society should strive for in the human relations in industry—a realization of an organic unity in each individual life, in each business, between businesses, and between business and society.

National Civic Federation. Minimum-wage committee. The minimum wage by law . . . Report made by Alexander J. Porter . . . January 17, 1916. 49 pp.

An analysis of this report appears on page 67 of this number of the Review.

National Metal Trades Association. Synopsis of proceedings, 18th convention, New York, 1916. 80 pp.

National Workmen's Compensation Service Bureau. A grouping of industries appearing in the Workmen's Compensation Manual with corresponding code numbers specially arranged for the convenience of statisticians. 51 pp. Appendix I, List of classifications which have been discontinued or regrouped. 17 pp. Published by the National Workmen's Compensation Service Bureau, 13 Park Row, New York City. [1916.]

A brief digest of this publication and the appendix appears on page 56 of this issue of the Review.

O'Grady, J. J. Cotton carding. Woonsocket, Robinson Press [1912]. 103 pp.

A handy reference book for superintendents and overseers.

[Ring, H. L.] The problem of the unemployed. (Anonymous.) 2d ed., Houston, Tex., 1915. 282 pp.

Rossiter, Alfred. A pocket manual for character analysts and employment managers. New York, Newcomb, 1915. 63 pp.

Samvirkende fagforbund i Danmark. Beretning til de Samvirkende fagforbunds repraesentantskabsmøde. April, 1914; April, 1915; and April, 1916. 3 vols. 136, 179, and 168 pp.

Reports of the annual meetings of the federated trade-unions of Denmark.

Sherman, P. T. Liability and workmen's compensation insurance on the reciprocal or interinsurance plan. 1916. 16 pp.

Smith, J. R. Commerce and industry. New York, Holt, 1916. 596 pp.

Springfield Survey Publications. Industrial conditions in Springfield, Illinois . . . L. C. Odencrantz and Z. L. Potter. New York, Russell Sage Foundation. June, 1916. 173 pp.

A survey by the Committee on Women's Work and the Department of Surveys and Exhibits. An analysis of this survey will appear in a later issue of the Review.

Trautman, W. E. One great union. 5th revised edition. Published by the Workers' International Industrial Union. Detroit. 31 pp.

Travelers' Insurance Company, Hartford, Conn. Coal mining hazards. Hartford, 1916. 174 pp.

United Shoe Machinery Company. Efficiency through hygiene. Beverly, 18 pp.

Van Kleeck, Mary. Industrial investigations of the Russell Sage Foundation . . . New York, January, 1916. 18 pp.

A brief account of the work and purpose of this foundation.

Van Overbergh, Cyr. La Grève Générale. Brussels and Leipzig, Misch & Thron, 1913. 651 pp.

A sociological study on the Belgian general strike of 1913, engineered by the workingmen of Belgium to obtain universal suffrage. After describing the form and object of the general strike of 1913, its organization, basis, and development, the author attempts to analyze its political and social results and to solve the question whether the prestige of the socialists or that of the bourgeoisie has gained in the conflict.

BUREAUS OF LABOR, INDUSTRIAL COMMISSIONS, ETC., AND THEIR CHIEF OFFICIALS.

State.	Name of bureau.	Name and title of chief official.		Location of bureau or address of board or commission.
		Name.	Title.	
United States	Bureau of Labor Statistics.	Royal Meeker	Commissioner	Washington, D. C.
Arkansas	Bureau of Labor and Statistics.	J. C. Clary	do	Little Rock.
		Edward I. McKinley.	Deputy commissioner.	Do.
California	Bureau of Labor Statistics.	John P. McLaughlin.	Commissioner	948 Market Street, San Francisco.
Colorado	do	Axel Swanson	Deputy commissioner.	Denver.
Connecticut	Department of Labor and Factory Inspection.	Wm. S. Hyde	Commissioner	Hartford.
Georgia	Department of Commerce and Labor.	H. M. Stanley	do	Atlanta.
		J. T. Derry	Assistant commissioner.	Do.
Hawaii	Department of Immigration, Labor, and Statistics.	Ralph A. Kearns	Commissioner	Honolulu.
Idaho	Bureau of Immigration, Labor, and Statistics.	S. J. Rich	Commissioner	Boise.
Illinois	Bureau of Labor Statistics.	L. D. McCoy	Secretary	Springfield.
Indiana	Bureau of Statistics	T. W. Brolley	Chief	Indianapolis.
Iowa	Bureau of Labor Statistics.	A. L. Urick	Commissioner	Des Moines.
Kansas	Department of Labor and Industry.	P. J. McBride	do	Topeka.
Kentucky	Bureau of Agriculture, Labor, and Statistics.	Mat S. Cohen	do	Frankfort.
Louisiana	Bureau of Labor and Industrial Statistics.	Wm. McGilvray	do	New Orleans.
Maine	Department of Labor and Industry.	Roscoe A. Eddy	do	Augusta.
Maryland	Bureau of Statistics and Information.	Charles J. Fox	Chief	Baltimore.
Massachusetts	Bureau of Statistics	C. F. Gettemy	Director	Boston.
Do	State Board of Labor and Industries (5 members).	Alfred W. Donovan	Chairman	721A New Albion Building, No. 1 Beacon Street, Boston.
		Mrs. Mary H. Dewey		
		John F. Tobin		
		James A. Donovan.		
		Dr. Alfred H. Quessy		
		Edwin Mulready	Commissioner of labor.	
Michigan	Department of Labor	J. V. Cunningham.	Commissioner	Lansing.
		James F. Hammell	Deputy commissioner.	Do.
Minnesota	Department of Labor and Industries.	W. F. Houk	Commissioner	St. Paul.
Missouri	Bureau of Labor Statistics.	J. T. Fitzpatrick	do	Jefferson City.
Montana	Department of Labor and Industry.	W. J. Swindlehurst.	do	Helena.
Nebraska	Bureau of Labor and Industrial Statistics.	Frank M Coffey	Deputy commissioner.	Lincoln.
Nevada	Labor Commissioner's Office.	W. E. Wallace	Labor commissioner.	Carson City.
New Hampshire	Bureau of Labor	J. S. B. Davie	Commissioner	Concord.
New Jersey	Department of Labor	Lewis T. Bryant	do	Trenton.
		John I. Holt	Assistant commissioner.	Do.
New York	State Industrial Commission.	John Mitchell	Chairman	Albany.
		Jas. M. Lynch		381 Fourth Avenue, New York City.
		Wm. H. H. Rogers		
		Louis Wiard		
		Edward P. Lyon		
		Henry D. Sayer	Secretary	
North Carolina	Department of Labor and Printing.	M. L. Shipman	Commissioner	Raleigh.
North Dakota	Department of Agriculture and Labor.	R. F. Flint	do	Bismarck.
Ohio	Industrial Commission (3 commissioners).	Wallace D. Yaple	Chairman	Columbus.
		Herbert L. Eliot	Vice chairman	Do.
		T. J. Duffy		Do.
		George L. Stoughton.	Secretary	Do.

BUREAUS OF LABOR, INDUSTRIAL COMMISSIONS, ETC.—Concluded.

State.	Name of bureau.	Name and title of chief official.		Location of bureau or address of board or commission.
		Name.	Title.	
Oklahoma	Department of Labor	W. G. Ashton	Commissioner	Oklahoma.
Oregon	Bureau of Labor Statistics and Inspection of Factories and Workshops.	O. P. Hoff	do	Salem.
Pennsylvania	Department of Labor and Industry.	John P. Jackson	do	Harrisburg.
Do	Industrial Board (5 members).	John P. Jackson	Commissioner of labor and industry.	Do.
		Mrs. Samuel Semple.		
		James C. Cronin		
		Otto T. Mallery		
		Maj. John P. Wood.		
		Wm. Lauder	Secretary	
Philippine Islands	Bureau of Labor	Manuel Tinio	Director	Manila.
Porto Rico	do	F. C. Roberts	Chief	San Juan.
Rhode Island	Bureau of Industrial Statistics.	G. H. Webb	Commissioner	Providence.
South Carolina	Department of Agriculture, Commerce, and Industries.	E. J. Watson	do	Columbia.
Tennessee	Department of Workshop and Factory Inspection.	W. L. Mitchell	Chief inspector	Nashville.
Texas	Bureau of Labor Statistics.	C. W. Woodman	do	Austin.
Utah	Bureau of Immigration, Labor, and Statistics.	H. T. Haines	do	Salt Lake City.
Virginia	Bureau of Labor and Industrial Statistics.	J. B. Doherty	do	Richmond.
Washington	Bureau of Labor	C. H. Younger	do	Olympia.
West Virginia	do	Jack H. Nightingale.	do	Wheeling.
Wisconsin	Industrial Commission (3 commissioners).	J. D. Beck	Chairman	Madison.
		Fred M. Wilcox		Do.
		George P. Hambrecht.		Do.
		P. J. Watrous	Secretary	Do.

STATE BUREAUS FOR FACTORY INSPECTION AND CHIEF INSPECTION OFFICIALS.

State.	Name of bureau.	Name and title of chief official.		Location of bureau or address of board or commission.
		Name.	Title.	
Alabama		W. H. Oates, M.D.	Inspector of jails, almshouses, cotton mills, and factories.	Box 282, Montgomery.
Arkansas	Bureau of Labor and Statistics.	J. C. Clary	Commissioner	Little Rock.
California	Bureau of Labor Statistics.	John P. McLaughlin.	do	948 Market Street, San Francisco.
Do	Industrial Accident Board.	A. J. Pillsbury	Chairman	Underwood Building, 525 Market Street, San Francisco.
Colorado	Bureau of Labor Statistics.	Alex. Swanson	Deputy commissioner of labor and chief factory inspector.	Denver.
Connecticut	Department of Labor and Factory Inspection.	Wm. S. Hyde	Factory inspector.	Hartford.
Delaware		Wm. Gibbons Miss Mary S. Malone. Dr. Wm. R. Messick.	Child labor inspector. Inspector for 10-hour law. Inspector of canneries.	Ford Building, Wilmington. 507 Washington Street, Wilmington. Rehoboth Beach.
Florida	Office of State Labor Inspector.	J. C. Privett	State labor inspector.	Room 6, Baldwin Building, Jacksonville.
Illinois	Department of Factory Inspection.	Oscar F. Nelson	Chief	608 South Dearborn Street, Chicago.
Indiana	Industrial Board	Edgar A. Perkins.	Chief inspector	Room 120, State Capitol, Indianapolis.
Iowa	Bureau of Labor Statistics.	A. L. Urick	Commissioner	Des Moines.
Kansas	Department of Labor and Industry.	P. J. McBride	Commissioner of labor and industry and ex officio State factory inspector.	Topeka.
Kentucky	Bureau of Agriculture, Labor, and Statistics.	Mat S. Cohen Jack Nelson	Commissioner Labor inspector	Frankfort. Paducah.
Louisiana	Bureau of Labor and Industrial Statistics.	Wm. McGilvray Mrs. Martha D. Gould.	Commissioner Factories inspector of Orleans Parish.	New Orleans. Room 11, City Hall New Orleans.
Maine	Department of Labor and Industry.	Roscoe A. Eddy	Commissioner of labor and State factory inspector.	Augusta.
Maryland	Bureau of Statistics and Information.	Charles J. Fox	Chief	Baltimore.
Do	Women's Ten-Hour Bureau.	Miss Sarah F. Martin.	Chief inspector	Equitable Building, Baltimore.
Massachusetts	State Board of Labor and Industries.	Alfred W. Donovan. Edwin Mulready	Chairman Commissioner of labor.	721A New Albion Building, No. 1, Beacon Street, Boston.
Michigan	Department of Labor	J. V. Cunningham.	Commissioner of labor and chief factory inspector.	Lansing.
Minnesota	Department of Labor and Industries.	W. F. Houk	Commissioner; chief inspector.	St. Paul.
Missouri	Department of Factory Inspection.	A. S. Johnston	Chief inspector	Fullerton Building, St. Louis.
Nebraska	Bureau of Labor and Industrial Statistics.	Frank M. Coffey	Deputy commissioner of labor and factory inspector.	Lincoln.
Nevada	Labor Commissioner's Office.	W. E. Wallace	Labor commissioner.	Carson City.

STATE BUREAUS FOR FACTORY INSPECTION AND CHIEF INSPECTION OFFICIALS—Concluded.

State.	Name of bureau.	Name and title of chief official.		Location of bureau or address of board or commission.
		Name.	Title.	
New Hampshire	Bureau of Labor	J. S. B. Davis	Labor commissioner and factory inspector.	Concord.
Do	Board of Health	Irving A. Watson, M. D.	Secretary.	
New Jersey	Department of Labor	Lewis T. Bryant	Commissioner	Trenton.
New York	State Industrial Commission.	John Mitchell	Chairman [1]	Albany.
Ohio	Industrial Commission.	Wallace D. Yaple. T. P. Kearns	Chairman Chief deputy, division of workshops, factories, and public buildings.	Columbus.
Oklahoma	Department of Labor	W. G. Ashton	Commissioner	Oklahoma.
Oregon	Bureau of Labor Statistics and Inspection of Factories and Workshops.	O. P. Hoff	Commissioner of labor and factory inspector.	Salem.
Do	Board of Inspectors of Child Labor.	H. G. Kundret Mrs. Mollie R. Trumbull.	Chairman Secretary	Portland.
Pennsylvania	Bureau of Inspection, Department of Labor and Industry.	John Price Jackson Lew R. Palmer	Commissioner Chief inspector	Harrisburg.
Rhode Island	Office of Factory Inspectors.	J. Ellery Hudson	do	Room 308, State House, Providence.
South Carolina	Department of Agriculture, Commerce, and Industries.	E. J. Watson	Commissioner	Columbia.
Tennessee	Department of Workshop and Factory Inspection.	W. L. Mitchell	Chief inspector	Nashville.
Texas	Bureau of Labor Statistics.	C. W. Woodman	Commissioner	Austin.
Utah	Bureau of Immigration, Labor, and Statistics.	H. T. Haines	do	Salt Lake City.
Vermont	Office of Factory Inspector.	Allan Calhoun	Factory inspector.	Middleburg.
Virginia	Bureau of Labor and Industrial Statistics.	J. B. Doherty	Commissioner	Richmond.
Washington	Bureau of Labor	C. H. Younger	Commissioner of labor.	Olympia.
West Virginia	do	Jack H. Nightingale.	Commissioner	Wheeling.
Wisconsin	Industrial Commission.	J. D. Beck C. W. Price	Chairman Assistant to commission.	Madison.

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[1] The first deputy commissioner of labor is inspector general of the State. The State is divided into 2 factory inspection districts, with a chief factory inspector under the commissioner of labor in charge of each.

MINIMUM WAGE BOARDS.

ARKANSAS.—Minimum Wage Commission (3 members):
- J. C. Clary.
- Mrs. Eva Reichardt Masingill.
- Miss Mary H. McCabe.
  - Address of commission: Little Rock.

CALIFORNIA.—Industrial Welfare Commission (5 members):
- Hon. Frank J. Murasky, judge of superior court, chairman.
- Mrs. Katherine Philips Edson.
- A. B. C. Dohrmann.
- A. Bonnheim.
- Walter G. Matthewson.
- H. A. Scheel, secretary.
  - Address of commission: San Francisco.

COLORADO.—State Wage Board:
- No board in existence since August, 1915; no appropriation.

KANSAS.—Industrial Welfare Commission (3 members):
- P. J. McBride, chairman.
- John Craddock.
- Mrs. Genevieve M. Chalkley.
- Miss Linna E. Bresette, secretary.
  - Address of commission: State Capitol, Topeka.

MASSACHUSETTS.—Minimum Wage Commission (3 commissioners):
- Arthur N. Holcombe, chairman.
- Mabel Gillespie.
- Edwin N. Bartlett.
- E. Nathalie Matthews, secretary.
  - Address of commission: Rooms 720-721, New Albion Building, 1 Beacon Street, Boston.

MINNESOTA.—Minimum Wage Commission (3 members):
- W. F. Houk, commissioner of labor, chairman.
- A. H. Lindeke.
- Eliza P. Evans, secretary.
  - Address of commission: St. Paul.

NEBRASKA.—Minimum Wage Commission:
- George E. Norman, Omaha.
- Anna L. Hawes, Lincoln.

OREGON.—Industrial Welfare Commission (3 members):
- Edwin V. O'Hara, chairman.
- Miss Margaret E. Howatson.
- Amedee M. Smith.
- Miss Bertha Moores, secretary.
  - Address of commission: 610 Commercial Block, Portland.

UTAH.—No board. Commissioner of immigration, labor, and statistics charged with enforcement of law.

WASHINGTON.—Industrial Welfare Commission (5 members):
- C. H. Younger, commissioner of labor.
- Mrs. Jackson Silbaugh, secretary.
- M. H. Marvin.
- Mrs. Florence H. Swanson.
- Mrs. W. H. Udall.
  - Address of commission: Olympia.

WISCONSIN.—Industrial commission (3 commissioners):
J. D. Beck, chairman.
Fred M. Wilcox.
George P. Hambrecht.
P. J. Watrous, secretary.
Address of commission: Madison.

INDUSTRIAL ACCIDENT BOARDS AND COMMISSIONS.

CALIFORNIA.—Industrial Accident Commission (3 commissioners):
A. J. Pillsbury, chairman.
Will J. French.
Meyer Lissner.
H. L. White, secretary.
Address of commission: Underwood Building, 525 Market Street, San Francisco.

COLORADO.—Industrial Commission:
E. E. McLaughlin, chairman.
W. C. Williams.
F. P. Lannon.
J. A. Warren, secretary.
Address of commission, Capitol Building, Denver.

CONNECTICUT.—Workmen's Compensation Commission (5 commissioners):
Frederic M. Williams, chairman, Waterbury.
Geo. E. Beers, 42 Church Street, New Haven.
Edward T. Buckingham, secretary, Bridgeport.
George B. Chandler, 209 Pearl Street, Hartford.
Dr. James J. Donohue, Willimantic.

ILLINOIS.—Industrial Board (3 members):
J. B. Vaughn, chairman.
P. J. Angsten.
Robert Eadie.
W. V. Conley, secretary.
Address of board: 1003–1004 City Hall Square Building, Chicago.

INDIANA.—Industrial Board:
Edgar A. Perkins.
Chas. R. Hughes.
Samuel R. Artman.
Howe S. Landers, secretary.
Address of board: State Capitol, Indianapolis.

IOWA.—Industrial Commissioner:
A. B. Funk, commissioner.
Ralph Young, secretary.
Address: Des Moines.

KENTUCKY.—Workmen's Compensation Board (3 members):
Robert T. Caldwell, chairman, Fayette Bank Building, Lexington.
R. C. P. Thomas, Bowling, Green
S. W. Hager, Louisville Trust Building, Louisville.
Alexander Gilmour, secretary, Frankfort.
Address of board: Frankfort.

MAINE.—Industrial Accident Board:
  Eben F. Littlefield, chairman.
  E. J. Carter.
  R. G. Eddy.
    Address of board: Augusta.
MARYLAND.—Industrial Accident Commission:
  John Milton Reifsnider, chairman.
  Charles D. Waggaman.
  James Higgins.
  Howard C. Hill, secretary.
    Address of commission: Equitable Building, Baltimore.
MASSACHUSETTS.—Industrial Accident Board (5 members):
  Frank J. Donahue, chairman.
  Chester E. Gleason.
  David T. Dickinson.
  Thomas F. Boyle.
  Joseph A. Parks.
  Robert E. Granfield, secretary and executive officer.
    Address of board: New Albion Building, 1 Beacon Street, Boston.
MICHIGAN.—Industrial Accident Board (3 members):
  Thos. B. Gloster, chairman.
  James A. Kennedy.
  Third member to be appointed.
  Gilbert W. Dickson, secretary.
    Address of board: Oakland Building, Lansing.
MONTANA.—Industrial Accident Board (3 members):
  A. E. Spriggs, chairman.
  William Keating.
  W. J. Swindlehurst.
  A. G. McNaught, secretary.
    Address of board: Helena.
NEVADA.—Industrial Commission (3 members):
  John J. Mullin, chairman.
  H. A. Lemmon.
  William E. Wallace.
    Address of commission: Carson City.
NEW JERSEY.—Employers' Liability Commission (6 members):
  Wm. B. Dickson, president.
  Samuel Botterill.
  J. Wm. Clark.
  John T. Cosgrove.
  Walter E. Edge.
  Edward K. Mills.
  Wm. E. Stubbs, secretary.
    Address of commission: Trenton.
NEW YORK.—State Industrial Commission:
  John Mitchell, chairman.
  Jas. M. Lynch.
  Wm. H. H. Rogers.
  Louis Wiard.
  Edward P. Lyon.
  Henry D. Sayer, secretary.
    Address of commission: Capitol Building, Albany.

OHIO.—Industrial Commission (3 commissioners):
  Wallace D. Yaple, chairman.
  Herbert L. Eliot, vice cahirman.
  T. J. Duffy.
  George L. Stoughton, secretary.
    Address of commission: Columbus.
OKLAHOMA.—Industrial Commission (3 members):
  A. A. McDonald, chairman.
  W. C. Jackson.
  W. L. Blessing.
    Address of commission: Oklahoma.
OREGON.—State Industrial Accident Commission (3 commissioners):
  Wm. A. Marshall, chairman.
  Harvey Beckwith.
  Carle Abrams.
    Address of commission: Salem.
PENNSYLVANIA.—Workmen's Compensation Board:
  Harry A. Mackey, chairman.
  James W. Leech.
  John A. Scott.
  John Price Jackson, ex officio member.
  Lee Solomon, secretary.
    Address of board: Harrisburg.
TEXAS.—Industrial Accident Board (3 members):
  T. H. McGregor, chairman.
  J. H. Fowler.
  J. H. Fricke.
  W. R. Long, secretary.
    Address of board: Austin.
VERMONT.—Industrial Accident Board (3 members):
  Robert W. Simonds, chairman.
  Sanford Daniels.
  Fred T. Pease.
  Laura M. Burbank, secretary.
    Address of board: Montpelier.
WASHINGTON.—Industrial Insurance Commission (3 commissioners):
  E. W. Olson, chairman.
  J. M. Wilson.
  F. I. Gill.
    Address of commission: Olympia.
WEST VIRGINIA.—Compensation Commissioner:
  Lee Ott, commissioner.
  C. L. Topping, secretary.
    Address: Charleston.
WISCONSIN.—Industrial Commission (3 commissioners):
  J. D. Beck, chairman.
  Fred M. Wilcox.
  George P. Hambrecht.
  P. J. Watrous, secretary.
    Address of commission: Madison.

ARBITRATION AND CONCILIATION BOARDS AND OFFICIALS.

ALABAMA.—State Board of Mediation and Arbitration (3 members):
George H. Denny, University.
E. W. Rucker, Birmingham.
James B. Drake, Birmingham.

ALASKA.—Gov. John F. A. Strong, Juneau.

ARKANSAS.—Commissioner of Labor and Statistics:
J. C. Clary, Little Rock.

CALIFORNIA.—State Board of Arbitration and Conciliation.
No board has been appointed; no appropriation.

COLORADO.—Industrial Commission (3 members):
E. E. McLaughlin, chairman.
Frank P. Lannon.
Wayne C. Williams.
J. A. Warren, secretary.
Address of Commission: Capitol Building, Denver.
Deputy Commissioner of Labor:
Axel Swanson, Capitol Building, Denver.

CONNECTICUT.—State Board of Mediation and Arbitration (3 members):
Lucius E. Whiton, New London.
Hugh C. Shalvoy, Danbury.
Edward W. Broder, Hartford.

GEORGIA.—Commissioner of Commerce and Labor:
H. M. Stanley, Atlanta.

IDAHO.—Labor Commission:
J. A. Davis, commissioner, Boise.
Hugh C. Wood, commissioner, Spencer.

ILLINOIS.—State Board of Arbitration (3 members):
Leo J. Winiecki, chairman, 2142 Clybourne Avenue, Chicago.
Harry M. Powell, care of Peoria Star Co., Peoria.
Lewis McGovern, Freeport.
Chas. D. Preble, secretary, 3610 Greenview Avenue, Chicago.

INDIANA.—Gov. Samuel M. Ralston, Indianapolis.
Governor may appoint arbitrators or investigators.

MAINE.—State Board of Conciliation and Arbitration (3 members):
Frederick Bogue, chairman, East Machias.
Reginald Ingalls, Bar Harbor.
Alden M. Flagg, secretary, Auburn.
Address of Board: Bangor.

MARYLAND.—Chief of Bureau of Statistics and Information:
Charles J. Fox, Baltimore.

MASSACHUSETTS.—State Board of Conciliation and Arbitration (3 members):
Willard Howland, chairman, Chelsea.
Charles G. Wood, Concord.
Frank M. Bump, Raynham.
Bernard F. Supple, secretary, Boston.
Address of Board: Room 128, State House, Boston.

MICHIGAN.—Commissioners of Mediation and Conciliation:
Frank L. Dodge, Dodge Block, Lansing.
James Couzens, Dime Bank Building, Detroit.

MINNESOTA.—State Board of Arbitration:
- H. M. Leighton, 127 South Tenth Street, Minneapolis.
- W. H. Goetzinger, Lexington Avenue, southwest corner Como Avenue, St. Paul.
- Third member died; no other appointment.

MISSOURI.—State Board of Mediation and Conciliation (3 members):
- C. B. Dysart, chairman, Moberly.
- J. C. Bassford, Mexico.
- Phil R. Toll, 430 Midland Building, Kansas City.
- H. F. Childers, secretary, Columbia.

MONTANA.—State Board of Arbitration and Conciliation.
- No appointments yet made.

NEBRASKA.—State Board of Negotiation and Conciliation (3 members):
- Robert B. Cowell, chairman, Omaha.
- Frank M. Coffey, Lincoln.
- Harry E. Reische, Chadron.

NEVADA.—Gov. Emmet D. Boyle, Carson City.

NEW HAMPSHIRE.—State Board of Conciliation and Arbitration (3 members):
- Dr. John H. Neal, chairman, 452 State Street, Portsmouth.
- George A. Tenney, Claremont.
- Francis J. Hurley, Towne Block, Manchester.

NEW YORK.—State Bureau of Mediation and Arbitration:
- Frank B. Thorn, chief mediator, Department of Labor, Albany.
- A. J. Donney, Department of Labor, Albany.
- James McManus, Department of Labor, Albany.
- Michael J. Reagan, 230 Fifth Avenue, New York City.

OHIO.—Industrial Commission (3 members):
- Wallace D. Yaple, chairman.
- Herbert L. Eliot.
- T. J. Duffy.
- George L. Stoughton, secretary.
  - Address of Commission: Columbus.

OKLAHOMA.—State Board of Arbitration (6 members):
- J. G. Leeper, Oklahoma City.
- Thos. Bell, Hughes.
- T. C. Wyatt, Wanette.
- M. F. Landon, Lehigh.
- Mont R. Powell, Oklahoma City.
- Richard Alexander, Chant.

PENNSYLVANIA.—State Bureau of Mediation and Arbitration:
- Patrick Gilday, chief of bureau, Harrisburg.

SOUTH CAROLINA.—Board of Conciliation and Arbitration (3 members):
- John A. Law, Spartanburg.
- John Lee Davis, Columbia.
- I. H. Hunt, Newberry.

UTAH.—State Board of Labor, Conciliation, and Arbitration (3 members):
- Lafayette Hanchett, 983 Third Avenue, Salt Lake City
- William Drysdale, Ogden.
- James Greenwell.

VERMONT.—State Board of Conciliation and Arbitration·
- Frederick E. Burgess, Burlington.
- Solon A. Richmond, Brattleboro.

WASHINGTON.—Labor Commissioner:
- C. H. Younger, Olympia.

WISCONSIN.—Industrial Commission (3 members):
- J. D. Beck, chairman.
- Fred M. Wilcox.
- George P. Hambrecht.
- P. J. Watrous, secretary.
  - Address of Commission: Madison.

UNITED STATES.—Board of Mediation and Conciliation:
- Martin A. Knapp, chairman.
- William L. Chambers, commissioner.
- G. W. W. Hanger, assistant commissioner and secretary.
  - Address of Commission: 920–927 Southern Building, Washington, D. C.

BUREAUS OF LABOR IN FOREIGN COUNTRIES.

Country.	Name of bureau.	Chief official.	Location of bureau.	Title of publication.	Frequency of issue.
Argentina	Departamento Nacional del Trabajo.	Presidente	Buenos Aires.	Boletin del Departamento nacional del Trabajo.	Monthly.
Australia	Labor and Industrial Branch (Bureau of Census and Statistics, Department of Home Affairs).	Commonwealth Statistician.	Melbourne	Labour Bulletin	Quarterly.
New South Wales.	Department of Labor and Industry.	Minister of Labor and Industry.	Sydney	New South Wales Industrial Gazette.	Monthly.
Queensland	Department of Labor	Director	Brisbane		
Austria	K. K. Arbeitsstatistisches Amt im Handelsministerium.	Vorstand	Vienna	Soziale Rundschau	Do.
Belgium	Office du Travail (Ministère de l'Industrie et du Travail).	Directeur Général.	Brussels	Revue du Travail	Do.
Canada	Department of Labor	Minister of Labor.	Ottawa	Labour Gazette	Do.
Ontario	Bureau of Labor (Department of Public Works).	Secretary	Toronto		
Chile	Oficina de Estadistica del Trabajo.	Jefe	Santiago	Boletin de la Oficina del Trabajo.	Do.
Denmark	Direcktoratet for arbejds, og fabriktilsynet.	Direktor	Copenhagen		
Finland	Industristyrelsen (Kejserliga Senaten).	do	Helsingfors	Arbetsstatistisk Tidskrift.	Bimonthly.
France	Office du Travail (Ministère du Travail et de la Prévoyance Sociale).	Directeur	Paris	Bulletin du Ministère du Travail et de la Prévoyance Sociale.	Monthly.
Germany	Abteilung für Arbeiterstatistik, Kaiserliches Statistisches Amt (Ministerium des Innern).	Präsident	Berlin	Reichsarbeitsblatt.	Do.
Great Britain	Department of Labor Statistics (Board of Trade).	Director	London	Board of Trade Labour Gazette.	Do.
Greece	Division of Labor and Social Welfare (Department of Industry) (Tmema Ergasias Kai Koinonkes Pronoias—Upourgeio tes Ethnikes Oikonomias).		Athens		
Italy	Ufficio del Lavoro (Ministero per l'Industria, il Commercio e il Lavoro).	Direttore Generale.	Rome	Bollettino dell' Ufficio del Lavoro.	Monthly, semimonthly.
	Ufficio Provinciale del Lavoro.	Deputato Provinciale.	Milan		
Mexico	Departamento del Trabajo		Mexico City.	Boletin del Departamento del Trabajo.	Monthly.
Netherlands	Directie van den Arbeid (Departement van Landbouw, Nijverheid en Handel).	Directeur Generaal.	The Hague		Do.
New Zealand.	Department of Labor	Minister of Labor.	Wellington	Journal of the Department of Labour.	Monthly.
Norway	Socialavdeligen (Departementet for Sociale Saker, Handel, Industri og fiskeri).	Direktor	Christiania	Sociale Meddelelser	Bimonthly.
Peru	[1]				
Porto Rico	Negociado del Trabajo	Jefe	San Juan	Boletin	Irregular.
Portugal	Repartição do Trabalho industrial (Direcção geral do Comercio e Industria), Ministerio do Fomento.		Lisbon	Boletim do Trabalho Industrial.	Do.
Roumania	[2]				

[1] Special labor division in the police department created in 1913, but its scope of investigation, etc., limited to the cities of Lima and Callao.

[2] A general ministry of commerce and industry.

BUREAUS OF LABOR IN FOREIGN COUNTRIES—Concluded.

Country.	Name of bureau.	Chief official.	Location of bureau.	Title of publication.	Frequency of issue.
Serbia	Section for Industry, Trade, and Social Legislation (Ministry of Political Economy) (Ministar Narodne Privrede).	....	Belgrade	....	
South Africa	(1)	....	....	....	
Spain	Instituto de Reformas Sociales.	Secretario General.	Madrid	Boletín del Instituto de Reformas Sociales.	Monthly.
Do	Dirección General de Comercio, Industria y Trabajo.	Director	do	Boletín Oficial de Comercio, Industria y Trabajo.	Do.
Sweden	K. K. Socialstyrelsen	Direktor	Stockholm	Sociala Meddelanden.	Do.
Switzerland	Secrétariat Ouvrier Suisse (semiofficial).	Secrétaire	Zurich	....	
Uruguay	Oficina del Trabajo (Ministero de Industrias, Trabajo e Instrucción Publica).	....	Montevideo.	Boletín de la Oficina del Trabajo.	Quarterly.
International	International Labor Office.	Director	Basel, Switzerland.	Bulletin	Irregular.

[1] Only a public employment office (labor department) in the ministry of mines and industry.

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the annual and special reports and of the bimonthly bulletin has been discontinued, and since July, 1912, a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual bulletins falling under each, is given below. A list of the reports and bulletins of the bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

No. 1. Wholesale prices, 1890 to 1912. (Bul. No. 114.)
No. 2. Wholesale prices, 1890 to 1913. (Bul. No. 149.)
No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. No. 173.)
No. 4. Wholesale prices, 1890 to 1914. (Bul. No. 181.)
No. 5. Wholesale prices, 1890 to 1915. (Bul. No. 200.)

Retail Prices and Cost of Living.

No. 1. Retail prices, 1890 to 1911: Part I. (Bul. No. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. No. 105: Part II.)
No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. No. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. No. 106: Part II.)
No. 3. Retail prices, 1890 to August, 1912. (Bul. No. 108.)
No. 4. Retail prices, 1890 to October, 1912. (Bul. No. 110.)
No. 5. Retail prices, 1890 to December, 1912. (Bul. No. 113.)
No. 6. Retail prices, 1890 to February, 1913. (Bul. No. 115.)
No. 7. Sugar prices, from refiner to consumer. (Bul. No. 121.)
No. 8. Retail prices, 1890 to April, 1913. (Bul. No. 125.)
No. 9. Wheat and flour prices, from farmer to consumer. (Bul. No. 130.)
No. 10. Retail prices, 1890 to June, 1913. (Bul. No. 132.)
No. 11. Retail prices, 1890 to August, 1913. (Bul. No. 136.)
No. 12. Retail prices, 1890 to October, 1913. (Bul. No. 138.)
No. 13. Retail prices, 1890 to December, 1913. (Bul. No. 140.)
No. 14. Retail prices, 1907 to December, 1914. (Bul. No. 156.)
No. 15. Butter prices, from producer to consumer. (Bul. No. 164.)
No. 16. Retail prices, 1907 to June, 1915. (Bul. No. 184.)
No. 17. Retail prices, 1907 to December, 1915. (Bul. No. 197.)

Wages and Hours of Labor.

No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. No. 128.)
No. 2. Wages and hours of labor in lumber, millwork, and furniture industries, 1890 to 1912.. (Bul. No 129.)
No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. No. 131.)
No. 4. Wages and hours of labor in boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. No. 134.)
No. 5. Wages and hours of labor in cigar and clothing industries, 1911 and 1912. (Bul. No. 135.)
No. 6. Wages and hours of labor in building and repairing of steam railroad cars, 1890 to 1912. (Bul. No. 137.)
No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. No. 143.)
No. 8. Wages and regularity of employment in dress and waist industry, New York City. (Bul. No. 146.
No. 9. Wages and regularity of employment in cloak, suit, and skirt industry. (Bul. No. 147.)
No. 10. Wages and hours of labor in cotton, woolen, and silk industries, 1907 to 1913. (Bul. No. 150.)
No. 11. Wages and hours of labor in iron and steel industry in U. S., 1907 to 1912. (Bul. No. 151.)
No. 12. Wages and hours of labor in lumber, millwork, and furniture industries, 1907 to 1913. (Bul. No. 153.)
No. 13. Wages and hours of labor in boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. No. 154.)
No. 14. Wages and hours of labor in clothing and cigar industries, 1911 to 1913. (Bul. No. 161.)
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No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. No. 171.)
No. 18. Wages and hours of labor in hosiery and underwear industry, 1907 to 1914. (Bul. No. 177.)
No. 19. Wages and hours of labor in boot and shoe industry, 1907 to 1914. (Bul. No. 178.)
No. 20. Wages and hours of labor in the men's clothing industry, 1911 to 1914. (Bul. No. 187.)
No. 21. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914. (Bul. No. 190.)
No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. No. 194.)
No. 23. Street railway employment in the United States. (Bul. No. 204.) [In press.]

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

Employment and Unemployment.

No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. No. 192.)
No. 2. Unemployment in the United States. (Bul. No. 195.)
No. 3. Proceedings of Employment Managers' Conference. (Bul. No. 196.)
No. 4. The British System of Labor Exchanges. (Bul. No. 206.) [In press.]
No. 5. Proceedings of the Employment Managers' Conference of Boston. (Bul. No. 202.) [In press.]

For material relating to these subjects, but not included in this series, see Miscellaneous series, Nos. 1, 10, 12 (Buls. Nos. 109, 172, 183).

Women in Industry.

No. 1. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. (Bul. No. 116.)
No. 2. Working hours of women in the pea canneries of Wisconsin. (Bul. No. 119.)
No. 3. Employment of women in power laundries in Milwaukee. (Bul. No. 122.)
No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bul. No. 160.)
No. 5. Summary of report on condition of woman and child wage earners in U. S. (Bul. No. 175.)
No. 6. Effect of minimum-wage determinations in Oregon. (Bul. No. 176.)
No. 7. Women in the boot and shoe industry in Massachusetts. (Bul. No. 180.)
No. 8. Unemployment among women in department and other retail stores of Boston, Mass. (Bul. No. 182.)
No. 9. Dressmaking as a trade for women. (Bul. No. 193.)

For material relating to this subject, but not included in this series, see Miscellaneous series, Nos. 2, 3, 8 (Buls. Nos. 117, 118, 167).

Workmen's Insurance and Compensation (including laws relating thereto).

No. 1. Care of tuberculous wage earners in Germany. (Bul. No. 101.)
No. 2. British National Insurance Act, 1911. (Bul. No. 102.)
No. 3. Sickness and accident insurance law of Switzerland. (Bul. No. 103.)
No. 4. Law relating to insurance of salaried employees in Germany. (Bul. No. 107.)
No. 5. Workmen's compensation laws of the United States and foreign countries. (Bul. No. 126.)
No. 6. Compensation for accidents to employees of the United States. (Bul. No. 155.)
No. 7. Compensation legislation of 1914 and 1915. (Bul. No. 185.)
No. 8. Compensation laws of the United States and foreign countries. (Bul. No. 203.) [In press.]

Industrial Accidents and Hygiene.

No. 1. Lead poisoning in potteries, tile works, and sanitary ware factories. (Bul. No. 104.)
No. 2. Hygiene of the painters' trade. (Bul. No. 120.)
No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bul. No. 127.)
No. 4. Lead poisoning in the smelting and refining of lead. (Bul. No. 141.)
No. 5. Industrial accident statistics. (Bul. No. 157.)
No. 6. Lead poisoning in the manufacture of storage batteries. (Bul. No. 165.)
No. 7. Industrial poisons used in the rubber industry. (Bul. No. 179.)
No. 8. Report of British departmental committee on danger in the use of lead in the painting of buildings. (Bul. No. 188.)
No. 9. Report of the committee on statistics and insurance cost of the International Association of Industrial Accident Boards and Commissions. (Bul. No. 201.) [Limited edition.]
No. 10. Anthrax as an occupational disease. (Bul. No. 205.) [In press.]
No. 11. Causes of death by occupation. (Bul. No. 207.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).

No. 1. Conciliation and arbitration in the building trades of Greater New York. (Bul. No. 124.)
No. 2. Report of industrial council of British Board of Trade on its inquiry into industrial agreements. (Bul. No. 133.)
No. 3. Michigan copper district strike. (Bul. No. 139.)
No. 4. Industrial court of the cloak, suit, and skirt industry of New York City. (Bul. No. 144.)
No. 5. Conciliation, arbitration, etc., in dress and waist industry, New York City. (Bul. No. 145.)
No. 6. Collective bargaining in the anthracite coal industry. (Bul. No. 191.)
No. 7. Collective agreements in the men's clothing industry. (Bul. No. 198.) [In press.]

Labor Laws of the United States (including decisions of courts relating to labor).

No. 1. Labor legislation of 1912. (Bul. No. 111.)
No. 2. Decisions of courts and opinions affecting labor, 1912. (Bul. No. 112.)
No. 3. Labor laws of the United States, with decisions of courts relating thereto. (Bul. No. 148.)
No. 4. Decisions of courts and opinions affecting labor, 1913. (Bul. No. 152.)
No. 5. Labor legislation of 1914. (Bul. No. 166.)
No. 6. Decisions of courts affecting labor, 1914. (Bul. No. 169.)
No. 7. Labor legislation of 1915. (Bul. No. 186.)
No. 8. Decisions of courts affecting labor, 1915. (Bul. No. 189.)

Foreign Labor Laws.

No. 1. Administration of labor laws and factory inspection in European countries. (Bul. No. 142.)

Vocational Education.

No. 1. Vocational education survey of Minneapolis. (Bul. No. 199.) [In press.]

For material relating to this subject, but not included in this series, see Wages and hours of labor series, No. 9 (Bul. No. 147); Conciliation and arbitration series, No. 5 (Bul. 145); Miscellaneous series, Nos. 6, 7 (Buls. Nos. 159, 162.)

Miscellaneous Series.

No. 1. Statistics of unemployment and the work of employment offices in United States. (Bul. No. 109.)
No. 2. Prohibition of nightwork of young persons. (Bul. No. 117.)
No. 3. Ten-hour maximum working-day for women and young persons. (Bul. No. 118.)
No. 4. Employers' welfare work. (Bul. No. 123.)
No. 5. Government aid to home owning and housing of working people in foreign countries. (Bul. No. 158.)
No. 6. Short-unit courses for wage earners, and a factory school experiment. (Bul. No. 159.)
No. 7. Vocational education survey of Richmond, Va. (Bul. No. 162.)
No. 8. Minimum-wage legislation in the United States and foreign countries. (Bul. No. 167.)
No. 9. Foreign food prices as affected by the war. (Bul. 170.)
No. 10. Unemployment in New York City, N. Y. (Bul. No. 172.)
No. 11. Subject index of publications of U. S. Bureau of Labor Statistics to May 1, 1915. (Bul. No. 174.)
No. 12. Regularity of employment in the women's ready-to-wear garment industry. (Bul. No. 183.
No. 13. Profit sharing in the United States. (Bul. No 208.) [In press.]

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U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
ROYAL MEEKER, Commissioner

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MONTHLY REVIEW
OF THE
U. S. BUREAU OF LABOR STATISTICS

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JOB SELLING IN INDUSTRIAL ESTABLISHMENTS IN OHIO.

Job selling involves the practice of paying to the foremen in industrial plants a fee for securing work and also of paying money to the foremen from time to time in order that the workman may not lose his job or may receive more desirable work. The first complaint of this sort of graft on the part of foremen came to the department of investigation and statistics of the Ohio Industrial Commission through the demands of a body of striking employees in the latter part of 1915. One of the demands of these strikers was for the discharge of a foreman to whom the foreign workmen were required to contribute money from time to time in order to hold their jobs or to secure an advance in wages. In response to this and subsequent complaints an investigation was instituted which developed the fact that the collection of fees for jobs, or assessments of various kinds, by foremen has been in the past few months carried on in at least six large industrial plants in the State employing approximately 40,000 men. The information collected in this connection is set forth in Report No. 24 of the Department of Investigation and Statistics.[1]

It was found that in some plants the custom has been established for years. With some foremen a box of cigars or a bottle of whisky was a sufficient "present" to secure a job 10 years ago; then the applicant learned that money was more acceptable, and $5 was the usual fee for the unskilled laborer; the applicant next learned that $2 or $3 extra would help him to get a job without waiting, or, in other words, it would place him on the preferred list; then the price rose to $10, and from that to $15; and at the time the investigations were begun the fee "expected" was generally $15, $20, or $25 for a job paying approximately 25 cents per hour.

The employees paying these fees are almost altogether non-English speaking foreigners, and those who profit from the fees are usually English speaking, or able to speak English, and quite generally of a different race from those who are exploited.

> Such a custom produces the worst possible type of industrial slavery, and it is small wonder that the much-exploited immigrant often feels bitter and

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[1] Ohio. Industrial Commission. Department of Investigation and Statistics Report No. 24. Job selling in industrial establishments in Ohio. Columbus, 1916. 88 pp.

that sometimes this bitterness manifests itself in acts of violence during the excitement incident to a strike. What respect can the immigrant be expected to have for organized society which permits such conditions to exist?

The story appears to be the same in establishment after establishment where special pains have not been taken to eliminate and to prevent exploitation. The evidence showed that the shrewder foreman, occupying a comparatively high position, seldom receives the money directly from the applicant, but usually has a number of men who act as go-betweens. These go-betweens may be "straw bosses" or they may be workmen. They are often of the same race as those who are to be exploited. The applicant pays the money to the go-between, and he in turn pays it to the foreman. Sometimes the money passes through the hands of two, three, or even four persons before it reaches the foreman. In some cases the go-between retains a small part of the money collected. The go-between, it seems, performs this service practically without pay, for two reasons: First, this enables him to stand in with his foreman, and thus to secure more desirable work or to be retained during periods of depression; and, second, it enables him to secure work for his friends and countrymen, and this gives him a certain standing in his circle of acquaintances. On the whole, the investigation seemed to show that there are reasons to believe that more or less grafting in the form of job selling by foremen, in collecting money from workmen for retaining them during slack times, for assigning them to more desirable jobs, or for increasing their wages, and in conducting raffles for the benefit of the foremen, is carried on to a greater or less extent in most of the large industrial plants where immigrants are employed.

The report states that in some of the six plants mentioned above very drastic measures have been taken to punish those foremen who have violated their trust and to devise plans for preventing grafting. In the majority of plants it is believed that the practice has been broken up, "but almost a complete reorganization of some departments in some plants will be necessary before the public can feel assured that this graft will be permanently discontinued. The public has a vital interest in this matter, for future citizens are receiving in those plants their first lessons in graft, and moral standards are being established for the community."

In these particular plants, as a result of the investigation and of prosecutions conducted by the attorney general's office, three foremen have been discharged by the company officials, who were convinced of their guilt, without trial; three threw up their jobs and left the State during the investigation; two stood trial and were convicted; three go-betweens pleaded guilty; one foreman was found not guilty by reason of insufficiency of evidence; and one was found not guilty on the grounds that as a general foreman he was a principal and not an agent within the meaning of the statute under which the prosecution was brought and that the evidence did not conclusively show that he had demanded money for jobs. In this case the evidence clearly established the fact that he had received money in a great number of cases, and that the custom of paying for jobs was a well-established one in that department.

The punishment provided by law is a fine of from $50 to $100, "and such a punishment is entirely inadequate, considering the seriousness of the crime." An effort will be made to induce the next legislature to enact a law covering not only the taking of a fee for a job, but also other forms of grafting on the part of foremen in industrial establishments.

The complicated machinery, the system, and the far-reaching effects of the practice of paying for jobs is indicated by the typical cases cited below, each of which is supported by affidavits and in some cases by the affidavits of witnesses to the transaction. Each of the letters or combination of letters represents the same individual throughout. Attention is called to the varying amounts, which seem to indicate a general upward trend of the market. The workman first named in each line was the applicant for a job.

MMM paid $15 to TTT, who paid $15 to N, who paid $15 to F, who paid $15 to A.
NN paid $15 to TTT, who paid $15 to N, who paid $15 to F, who paid $15 to A.
RRRR paid $9 to PPP, who paid $9 to I, who paid $9 to A.
UUU paid $10 to JJJ, who paid $10 to I, who paid $10 to A.
JJJ paid $7 to L, who paid $7 to I, who paid $7 to A.
TTT paid $15 to N, who paid $15 to I, who paid $15 to A.
XXX paid $16 to RRR, who paid $16 to I, who paid $12 to A.
YYY paid $13 to F, who paid $13 to I, who paid $9 to A.
BBBB paid $10 to LL, who paid $6 to I, who paid $6 to A.
CCCC paid $11 to ZZ, who paid $10 to I, who paid $10 to A.
DDDD paid $8 to LL, who paid $7 to I, who paid $7 to A.
GGGG paid $10 to N, who paid $10 to I, who paid $10 to A.
KKKK paid $15 to JJJJ, who paid $15 to I, who paid $15 to A.
LLLL paid $16 to JJJJ, who paid $16 to I, who paid $16 to A.
MMMM paid $15 to JJJJ, who paid $15 to I, who paid $15 to A.
NNNN paid $25 to JJJJ, who paid $25 to I, who paid $17 to A.
IIII paid $9 to N, who paid $9 to I, who paid $9 to A.
CCC paid $10 to L, who paid $10 to J, who paid $10 to A.
DDD paid $10 to L, who paid $8 to J, who paid $5 to A.
EEE paid $15 to L, who paid $15 to J, who paid $15 to A.
FFF paid $10 to L, who paid $10 to J, who paid $10 to A.
GGG paid $25 to L, who paid $15 to J, who paid $15 to A.
HHH paid $15 to L, who paid $15 to J, who paid $15 to A.
QQ paid $15 to OO, who paid $15 to K, who paid $15 to A.
YY paid $15 to H, who paid $10 to A.

O paid $7 to H, who paid $5 to A.
P paid $20 to O, who paid $15 to H, who paid $10 to B.
R paid $17 to G, who paid $17 to B.
S paid $21 to G, who paid $20 to B.
T paid $20 to G, who paid $20 to B.
U paid $20 to B.
SS paid $15 to XX, who paid $15 to C.
TT paid $15 to XX, who paid $15 to C.
UU paid $10 to XX, who paid $10 to C.
VV paid $15 to XX, who paid $15 to C.
WW paid $15 to XX, who paid $15 to C.
W paid $5 to V, who paid $5 to D.
V paid $15 to D.
QQQ paid $25 to D.
M paid $20 to E.
RRRR paid $30 to E.
KKK paid $20 to N, who paid $20 to F, who paid $10 to Q.
OOOO paid $15 to N, who paid $15 to F, who paid $8 to Q.
PPPP paid $23 to N, who paid $20 to F, who paid $10 to Q.

The report includes 49 typical affidavits, of which the following are characteristic:

I, ——— ———, No. ——, being first duly sworn, depose and say that I have worked for the past six years for the A. B. Co., under X———, labor boss, and Y——— and Z———, straw bosses. I paid nothing when I went to work, but Christmas Y——— and Z——— collected money from the men. This money was taken up at the shanty, where they would call the men in two or three at a time. One would take the money and the other would enter it in a book. Last Christmas X——— asked me for the money several days before the first pay day in December. I paid him $5 the first pay day in December at the labor shanty, and Y——— wrote down my name in a book.

I further depose and say that I have bought tickets for raffles from Y——— and Z——— for $2 watches, which they said belonged to X———.

——— ———, being duly sworn, deposes and says that on or about May 8, 1915, he went to the C. D. Co. and asked the assistant foreman, named F, for a job in his department ———. F——— told me that I would have to pay $16 to him and he would give it to A———, and he (A———) would put me to work. F——— and I then went to the home of A——— on ——— Avenue, ———, Ohio, and F——— talked to A———, who went with us to a saloon near A———'s home, where I paid $16 to F———, who handed this to A——— while we were in the saloon. I was compelled to treat the crowd, which cost me $8 in addition to the $16 already paid. In about six days I went to the C. D. Co. and got a ticket from F——— and then went to A———, who put me to work. The affiant further says that when he had worked about two months F——— came to him and said that A——— sent him to get $16 more or I would lose my job. I am married and have a wife and three children to support, so I could not afford to pay the second time; therefore I was compelled to quit my job.

——— ———, who, being duly sworn, deposes and says that on or about November 15, 1914, he applied for a job to B——— at the E. F. Co.'s plant. Being unable to speak English, he talked to F———, who could speak Bulgarian and English and who was present when he tried to get a job from

B———. F——— explained to B——— that I wanted a job, and B——— told him to ask me for $5; that he had a job if I would give B——— $5, which I did. I paid this money to B——— on or about November 15, 1914, and went to work. After I had worked three days F——— came to me and told me that I would have to pay B——— another fee of $5 or I would be discharged, as one of the other men had paid B——— $20, and if I wanted to keep my job I must pay him an additional $5. I paid the second $5 to B——— on or about November 18, 1914, and was allowed to continue work.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, AUGUST 16 TO SEPTEMBER 15, 1916.

The organic act of the department gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation. During the month August 16 to September 15, 1916, the Secretary exercised his good offices in 12 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, AUG. 16 TO SEPT. 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike at Frank Sheble Spinning Co., Philadelphia, Pa.			Adjusted.
Strike at German-American Hosiery Mills, Philadelphia, Pa.	900		Do.
Strike of machinists, New Haven, Conn			Pending.
Strike at Royle & Pilkington's Upholstery Mills, Philadelphia, Pa.	72	135	Adjusted.
Controversy between the Cincinnati, Indianapolis & Western R. R. and the Brotherhood of Railway Car men, Cincinnati, Ohio.			Pending.
Strike of wheelsmen, lookoutmen, watchmen, oilers, etc., Goodrich Transit Co., Chicago, Ill.			Do.
Strikes at Equinox, Brogon, and Gluck Rural Mills, Anderson, S. C.	290		Do.
Strike of shingle weavers, Everett, Wash			Do.
Textile controversy, Bangor, Pa			Do.
Textile controversy, Shamokin, Pa	3,000		Do.
Lockout of freight handlers, Chicago, Ill			Do.
Controversy between Pacific Coast Light & Power Co. and electrical workers, Los Angeles, Cal.			Do.

Cases noted as pending in statement of August 15 have been disposed of as follows:

Controversy between Baltimore & Ohio Railroad Co. and its maintenance-of-way employees, Baltimore, Md., in which there were 1,200 men directly affected, and between 15,000 and 20,000 indirectly affected, has been adjusted.

Controversy between Crown Cork & Seal Co. and machinists, Baltimore, Md.; 175 directly and 2,000 to 2,500 indirectly affected; adjusted.

Controversy between Akron (Ohio) rubber manufacturers and employees; 1,400 directly and 2,600 indirectly affected; adjusted.

Threatened strike of milk-delivery drivers, Cleveland, Ohio; 500 directly and 200 indirectly affected; adjusted by Mediation Board of Ohio.

Strike of milk-delivery drivers, St. Louis, Mo.; 600 men directly involved; unable to adjust.

MEDIATION OF INDUSTRIAL DISPUTES IN OHIO.

Report No. 23 of the Department of Investigation and Statistics of the Ohio Industrial Commission[1] sets forth the activities of the commission in the mediation of industrial disputes from January, 1914, to June, 1916, inclusive. During this two and one-half year period 26 such disputes, involving more than 200 firms and approximately 35,000 employees, were taken up under the provisions of the industrial commission act. In no case was arbitration undertaken. Mediation resulted in a settlement in 11 of the 26 disputes. Although authorized by law to mediate at any time that the industrial commission deems it advisable, the commission in practice has usually waited until requested to act. However, in cases of unusual importance, either where a great number are involved or where there is violence or where the public is specially inconvenienced, mediation has been undertaken without request. As the work has been carried on in Ohio, only the most difficult disputes receive the attention of the commission.

> Mediation can not bring about exact industrial justice, but probably no method of settling industrial disputes can more nearly approach justice if fairly and fearlessly carried out. Exact industrial justice would not take into consideration the demands of the employees or the proposals of employers, but would be determined after a full investigation and inquiry into cost of production, cost of maintaining a satisfactory standard of living, distribution of profits, and all other such matters. However, mediation as well as practically all other methods of securing settlements is confined on the one side by the employees' demands and on the other by the employers' proposals, or vice versa.

In mediating strikes in Ohio during the period covered by this report the usual practice seems to have been not to bring the representatives of each side together in conference, but instead to hold confidential conferences first with one side and then with the other until the facts in the case were secured and a satisfactory basis of settlement determined upon by the mediators. As a rule, it is stated, the final terms of the settlement have come not as a proposal from either side, but as a proposal from the mediators, with the definite understanding that unless it was accepted without change by both sides the proposition would be withdrawn by the mediators, thus leaving each side in exactly its former position. It would seem that mediation under this plan does not disclose to either side either the weak points or the strong points in the position of the opposing side.

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[1] Ohio. Industrial Commission. Department of Investigation and Statistics Report No. 23. Mediation of industrial disputes in Ohio, January, 1914, to June, 1916. Columbus, 1916. 48 pp.

The report justifies the principle of mediation by pointing out several advantages which attend its application. These are—

> Mediation has a very marked influence in removing the bitterness which often occurs during, or even continues after, industrial disputes.
>
> Mediation in Ohio has usually also materially reduced the duration of the industrial disputes, and this has been a great financial saving to employers, to employees, and to the community.
>
> Another marked benefit of mediation arises from the fact that violence is practically eliminated during the time negotiations for a settlement are under way by the mediators.

It is suggested that the present law requires a slight modification, by providing that the mayor or some other local official should notify the industrial commission of industrial disputes within the community over which he has authority.

During the two and one-half years covered by the report the total amount spent in connection with the mediation work did not exceed $4,000, or $363.63 for each dispute settled, a sum not considered excessive in view of the financial gain to employers and employees by reason of the activities of the mediators. The report includes a detailed account of the 26 disputes in which the commission acted as mediator.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During August, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 16,313 persons in employment as compared with 16,309 during July, 1916. The operations of the different offices throughout the country, by months, since May, 1915, when fuller reports began to be made, are contained in the statement following:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, DURING THE MONTHS OF MAY, 1915, TO AUGUST, 1916.

Year and month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.
1915.					
May	638	3,826	12,132	3,752	3,495
June	1,249	3,601	14,530	5,131	4,646
July	1,160	8,665	18,061	6,360	6,035
August	1,279	7,931	17,827	7,321	6,757
September	1,201	4,551	13,334	5,671	5,405
October	1,104	5,423	12,215	5,460	5,006
November	847	4,650	11,908	4,459	4,146
December	698	3,588	11,902	2,622	2,170
1916.					
January	933	5,063	15,015	4,300	3,419
February	1,423	6,413	14,257	5,036	4,185
March	3,443	10,209	19,484	8,113	7,030
April	3,805	12,104	13,498	8,843	7,653
May	4,918	21,326	17,614	12,938	11,453
June	4,826	17,402	18,824	13,839	11,960
July	5,488	23,657	24,058	17,608	16,309
August	6,420	26,791	23,720	18,062	16,313

The following statement of the work of the 18 different zones covering the whole country gives details for July and August, 1916:

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR THE MONTHS OF JULY AND AUGUST, 1916.

Zone number and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	July.	August.	July.	August.	July.	August.	July.	August.	July.	August.
1. Boston, Mass	7	3	141	1,640	54	54	14	12	14	12
2. New York, N. Y	245	231	956	1,303	1,128	1,692	510	579	494	550
Buffalo, N. Y	93	115	850	815	698	839	694	787	517	634
Total	338	346	1,806	2,118	1,826	2,531	1,204	1,366	1,011	1,184
3. Philadelphia, Pa	86	77	588	1,328	302	257	288	246	224	209
Pittsburgh, Pa	15	24	196	425	505	809	273	491	246	463
Wilmington, Del	21	19	524	338	101	52	27	48	13	40
Total	122	120	1,308	2,091	908	1,118	588	785	483	712
4. Baltimore, Md	42	53	110	217	156	161	192	145	180	145
5. Norfolk, Va	17	13	182	50	114	222	42	75	22	60
6. Jacksonville, Fla	......	......	......	......	732	511	515	198	515	198
Miami, Fla	1	3	2	3	14	38	2	3	2	1
Savannah, Ga	2	1	106	1	362	187	106	1	106	1
Charleston, S. C	1	2	38	11	97	12	169	83	169	83
Mobile, Ala	......	......	......	......	10	2	......	......	......	......
Total	4	6	146	15	1,215	750	792	285	792	283
7. New Orleans, La	18	30	21	42	289	390	35	50	13	33
Gulfport, Miss	1	1	1	1	47	60	......	6	......	......
Memphis, Tenn	......	4	......	6	......	49	......	......	......	......
Total	19	35	22	49	336	499	35	56	13	33
8. Galveston, Tex	5	6	6	8	34	40	11	8	9	4
Houston, Tex	......	3	......	6	9	14	......	3	......	3
Amarillo, Tex	......	......	......	......	......	1	......	......	......	......
Eagle Pass, Tex	......	......	......	......	......	1	......	1	......	......
El Paso, Tex	......	......	......	......	1	......	......	......	......	......
Albuquerque, N. Mex	......	......	......	......	3	2	......	......	......	......
Total	5	9	6	14	47	58	11	12	9	7
9. Cleveland, Ohio	21	10	201	15	125	101	88	96	12	13
10. Chicago, Ill	220	252	1,702	1,709	1,096	1,634	1,050	1,619	1,022	1,592
Detroit, Mich	153	241	1,269	1,256	1,072	1,066	1,063	1,066	1,044	1,062
Sault Ste. Marie, Mich	8	9	81	120	77	88	64	89	63	89
Indianapolis, Ind	62	68	857	721	866	654	737	490	660	417
Total	443	570	3,909	3,806	3,111	3,442	2,914	3,264	2,789	3,160
11. Minneapolis, Minn	118	55	128	70	70	260	60	49	60	49
12. St. Louis, Mo	14	215	117	550	200	392	50	320	45	302
Kansas City, Mo	505	558	1,458	1.142	1,228	1,012	1,006	1,032	787	833
Total	519	773	1,575	1,692	1,428	1,404	1,056	1,352	832	1,135
13. Denver, Colo	3	2	8	2	27	20	8	10	......	2
14. Helena, Mont	3	8	3	18	27	18	8	8	......	6
Moscow, Idaho	......	......	......	......	......	4	......	4	......	4
Total	3	8	3	18	27	22	8	12	......	10

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR THE MONTHS OF JULY AND AUGUST, 1916—Concluded.

Zone number and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	July.	August.	July.	August.	July.	August.	July.	August.	July.	August.
15. Seattle, Wash........	150	135	829	880	1,317	957	456	402	416	354
Aberdeen, Wash......	20	25	92	180	226	378	92	180	92	172
Bellingham, Wash....	31	22	162	35	167	66	92	42	75	34
Colfax, Wash.........	....	246	....	522	....	375	....	365	....	365
Everett, Wash.......	....	59	....	785	....	10	....	8	....	6
North Yakima, Wash.	538	850	925	1,838	883	1,766	728	1,575	696	1,451
Spokane, Wash.......	74	109	580	605	639	712	511	605	511	595
Tacoma, Wash.......	530	442	2,529	1,150	1,165	1,325	1,088	1,028	1,065	1,018
Walla Walla, Wash...	209	213	390	400	490	316	382	285	375	276
Sumner, Wash.......	350	....	2,500	....	1,894	....	1,775	....	1,768	....
Puyallup, Wash......	150	....	1,250	....	650	....	639	....	628	....
Total...............	2,052	2,101	9,257	6,395	7,431	5,905	5,763	4,490	5,626	4,271
16. Portland, Oreg.......	1,224	1,439	2,589	3,269	2,512	2,627	2,454	2,378	2,399	2,262
Astoria, Oreg........	....	25	....	170	....	171	....	140	....	104
Total..............	1,224	1,464	2,589	3,439	2,512	2,798	2,454	2,518	2,399	2,366
17. San Francisco, Cal....	193	425	412	817	1,248	1,330	654	807	378	321
18. Los Angeles, Cal......	....	1	....	1	103	149	....	1	....	1
San Diego, Cal........	335	348	778	651	1,017	1,035	803	866	767	688
Total...............	335	349	778	652	1,120	1,184	803	867	767	689
Harvest hands............	[1] 23	[2] 78	[1] 1,081	[2] 3,691	[1] 2,303	[2] 1,861	[1] 992	[2] 1,861	[1] 922	[1] 1,861
Grand total........	5,488	6,420	23,657	26,791	24,058	23,720	17,608	18,062	16,309	16,313

[1] Through general inspector, Kansas City, Mo.
[2] Through Hudson, S. Dak., branch of Minneapolis office. Figures for entire season.

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT BUREAUS IN CANADA.

In the following table data are presented for August, 1915, and August, 1916, relative to the operations of public employment offices in the United States and in Canada. For offices in the United States, figures are furnished for State employment bureaus in 15 States, municipal employment bureaus in 7 States, State-city employment bureaus in 2 States, a Federal-State employment bureau in 1 State, and a city-private employment bureau in 1 State. Data are furnished for 2 provincial employment bureaus in Canada.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, AUGUST, 1915 AND 1916.

UNITED STATES.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
California (municipal):						
Berkeley—						
August, 1915	158	171	78	416	171	171
August, 1916	256	276	87	356	258	258
Sacramento—						
August, 1915	144	392	101	(1)	392	392
August, 1916	204	391	51	(1)	391	391
California (State-city):						
Los Angeles [2]—						
August, 1915	(1)	(1)	1,647	(1)	(1)	3,500
August, 1916	1,540	3,766	1,365	(1)	3,738	3,601
California (State):						
Oakland—						
August, 1916	943	1,297	635	369	1,220	803
Sacramento—						
August, 1916	459	2,418	1,440	329	1,689	1,586
San Francisco—						
August, 1916	1,571	3,718	2,418	728	2,849	2,173
Total:						
August, 1915	....	....	....	....	563	4,063
August, 1916	....	....	....	....	10,145	8,812
Colorado (State):						
Colorado Springs—						
August, 1915	(1)	870	(1)	(1)	(1)	840
August, 1916	(1)	1,479	1,227	(1)	1,104	(1)
Denver No. 1—						
August, 1915	(1)	248	(1)	(1)	(1)	233
August, 1916	(1)	446	409	(1)	371	(1)
Denver No. 2—						
August, 1915	(1)	148	(1)	(1)	(1)	148
August, 1916	(1)	722	584	(1)	453	(1)
Pueblo—						
August, 1915	(1)	257	(1)	(1)	(1)	257
August, 1916	(1)	491	590	(1)	482	(1)
Total:						
August, 1915	....	....	....	....	(1)	1,478
August, 1916	....	....	....	....	2,410	(1)
Connecticut (State):						
Bridgeport—						
August, 1915	343	(1)	(1)	(1)	(1)	303
August, 1916	938	(1)	(1)	(1)	(1)	845
Hartford—						
August, 1915	509	(1)	(1)	(1)	(1)	389
August, 1916	778	(1)	(1)	(1)	(1)	485
New Haven—						
August, 1915	310	(1)	(1)	(1)	(1)	231
August, 1916	852	(1)	(1)	(1)	(1)	664
Norwich—						
August, 1915	54	(1)	(1)	(1)	(1)	50
August, 1916	148	(1)	(1)	(1)	(1)	144
Waterbury—						
August, 1915	287	(1)	(1)	(1)	(1)	144
August, 1916	157	(1)	(1)	(1)	(1)	112
Total:						
August, 1915	....	....	....	....	(1)	1,117
August, 1916	....	....	....	....	(1)	2,250
Illinois (municipal):						
Chicago—						
August, 1916	25	912	904	(1)	912	331
Illinois (State):						
Chicago—						
August, 1915	(1)	841	6,805	(1)	(1)	692
August, 1916	(1)	9,814	12,482	(1)	(1)	9,049
East St. Louis—						
August, 1915	(1)	642	1,043	(1)	(1)	621
August, 1916	(1)	1,925	1,925	(1)	(1)	1,425
Peoria—						
August, 1915	(1)	563	628	(1)	(1)	521
August, 1916	(1)	1,043	912	(1)	(1)	847

[1] Not reported.
[2] Includes Los Angeles district, 8 counties.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, AUGUST, 1915 AND 1916—Continued.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Illinois (State)—Concluded.						
Springfield—						
August, 1915	(1)	267	430	(1)	(1)	265
August, 1916	(1)	670	684	(1)	(1)	602
Rock Island-Moline—						
August, 1915	(1)	410	510	(1)	(1)	408
August, 1916	(1)	1,335	737	(1)	(1)	627
Rockford—						
August, 1915	(1)	395	491	(1)	(1)	389
August, 1916	(1)	1,502	1,294	(1)	(1)	1,031
Total:						
August, 1915	....	....	....	....	(1)	2,896
August, 1916	....	....	....	....	912	13,912
Indiana (State):						
Fort Wayne—						
August, 1915	209	288	223	74	297	285
August, 1916	326	522	385	67	452	375
South Bend—						
August, 1915	167	298	405	64	292	260
August, 1916	223	922	452	32	401	357
Total:						
August, 1915	....	....	....	....	589	545
August, 1916	....	....	....	....	853	732
Iowa (State):						
Des Moines—						
August, 1916	31	436	120	18	103	70
Kansas (State):						
Topeka—						
August, 1915	16	30	45	....	27	17
August, 1916	21	57	68	....	51	36
Kentucky (city-private):						
Louisville—						
August, 1915	(1)	140	492	1,124	140	86
August, 1916	389	389	350	590	280	145
Kentucky (State):						
Louisville—						
August, 1916	590	590	[2] 768	(1)	590	590
Total:						
August, 1915	....	....	....	....	140	86
August, 1916	....	....	....	....	870	735
Massachusetts (State):						
Boston—						
August, 1915	1,356	1,580	[3] 943	(1)	[4] 2,757	1,225
August, 1916	2,280	2,561	[3] 1,356	(1)	[4] 3,617	1,645
Fall River[5]—						
August, 1915	....	....	....	....	....	....
August, 1916	....	....	....	....	....	....
Springfield—						
August, 1915	650	931	[3] 538	(1)	[4] 1,156	713
August, 1916	1,185	1,788	[3] 949	(1)	[4] 2,137	1,224
Worcester—						
August, 1915	457	608	[3] 531	(1)	[4] 843	390
August, 1916	1,077	1,337	[3] 596	(1)	[4] 1,385	731
Total:						
August, 1915	....	....	....	....	[4] 4,756	2,328
August, 1916	....	....	....	....	[4] 7,139	3,600
Michigan (State):						
Battle Creek—						
August, 1916	73	277	199	(1)	171	171
Bay City—						
August, 1916	52	184	133	(1)	98	98
Detroit—						
August, 1915	(1)	(1)	(1)	(1)	(1)	2,033
August, 1916	1,609	5,246	(1)	(1)	(1)	4,315
Flint—						
August, 1915	(1)	(1)	(1)	(1)	(1)	361
August, 1916	108	1,182	961	(1)	961	961

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[1] Not reported.
[2] Number applying for work.
[3] Number who were registered.
[4] Number of offers of positions.
[5] Closed in August, 1915, and August, 1916.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, AUGUST, 1915 AND 1916—Continued.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Michigan (State)—Concluded.						
Grand Rapids—						
August, 1915	(1)	(1)	(1)	(1)	(1)	588
August, 1916	462	890	871	(1)	855	855
Jackson—						
August, 1915	(1)	(1)	(1)	(1)	(1)	565
August, 1916	426	868	816	(1)	796	796
Kalamazoo—						
August, 1915	(1)	(1)	(1)	(1)	(1)	377
August, 1916	179	509	479	(1)	479	479
Lansing—						
August, 1916	74	239	250	(1)	228	228
Muskegon—						
August, 1916	69	342	253	(1)	242	234
Saginaw—						
August, 1915	(1)	(1)	(1)	(1)	(1)	665
August, 1916	168	1,047	942	(1)	942	942
Total:						
August, 1915					(1)	4,589
August, 1916					4,772	9,079
Minnesota (State):						
Duluth—						
August, 1915	(1)	(1)	(1)	(1)	(1)	879
August, 1916	(1)	(1)	(1)	(1)	(1)	1,498
Minneapolis—						
August, 1915	(1)	(1)	(1)	(1)	(1)	1,960
August, 1916	(1)	(1)	(1)	(1)	(1)	2,307
St. Paul—						
August, 1915	(1)	(1)	(1)	(1)	(1)	1,158
August, 1916	(1)	(1)	(1)	(1)	(1)	1,609
Total:						
August, 1915					(1)	4,017
August, 1916					(1)	5,414
Montana (municipal):						
Butte—						
August, 1915	437	437	700	(1)	470	429
August, 1916	500	500	650	(1)	490	460
New York (municipal):						
New York City—						
August, 1915	406	553	1,756	(1)	1,035	440
August, 1916	2,188	2,476	2,491	(1)	3,729	1,985
New York (State):						
Albany—						
August, 1915	220	329	664	164	451	228
August, 1916	533	764	487	171	696	407
Brooklyn—						
August, 1915	479	778	1,450	658	1,097	494
August, 1916	1,311	1,890	1,116	548	2,110	1,230
Buffalo—						
August, 1915	447	621	1,009	342	646	422
August, 1916	960	1,757	1,120	67	1,659	1,222
Rochester—						
August, 1915	550	817	837	148	844	503
August, 1916	1,113	1,602	794	317	1,556	873
Syracuse—						
August, 1915	548	768	1,053	90	915	523
August, 1916	783	905	514	119	834	647
Total:						
August, 1915					4,988	2,610
August, 1916					10,584	6,364
Ohio (State-city):						
Akron—						
August, 1915	(1)	1,460	1,282	2,130	1,363	1,119
August, 1916	(1)	1,764	756	1,298	1,623	1,405
Cincinnati—						
August, 1915	(1)	1,297	2,146	3,812	1,570	1,154
August, 1916	(1)	1,672	1,424	2,882	1,665	989

[1] Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, AUGUST, 1915 AND 1916—Continued.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Ohio (State-city)—Concluded.						
Cleveland—						
August, 1915	(1)	4,449	2,958	7,816	4,097	3,421
August, 1916	(1)	8,321	2,769	7,296	7,181	5,858
Columbus—						
August, 1915	(1)	1,401	833	2,485	1,366	1,198
August, 1916	(1)	2,565	813	2,238	2,320	1,919
Dayton—						
August, 1915	(1)	761	805	1,663	615	598
August, 1916	(1)	1,288	771	1,120	1,041	946
Toledo—						
August, 1915	(1)	1,987	1,582	2,093	1,825	1,698
August, 1916	(1)	4,484	1,401	2,162	2,676	2,267
Youngstown—						
August, 1915	(1)	635	728	773	654	594
August, 1916	(1)	1,507	761	1,145	1,360	1,127
Total:						
August, 1915					11,490	9,782
August, 1916					17,866	14,511
Oklahoma (State):						
Enid—						
August, 1915	225	(1)	229	(1)	(1)	192
August, 1916	113	(1)	153	(1)	(1)	100
Muskogee—						
August, 1915	99	(1)	160	(1)	(1)	121
August, 1916	213	(1)	215	(1)	(1)	191
Oklahoma City—						
August, 1915	385	(1)	477	(1)	(1)	336
August, 1916	526	(1)	454	(1)	(1)	443
Tulsa—						
August, 1915	167	(1)	151	(1)	(1)	140
August, 1916	701	(1)	693	(1)	(1)	693
Total:						
August, 1915					(1)	789
August, 1916					(1)	1,427
Pennsylvania (State):						
Altoona—						
August, 1916	(1)	537	54		24	24
Harrisburg—						
August, 1916	(1)	795	230	112	207	188
Johnstown—						
August, 1916	(1)	185	74	16	67	54
Philadelphia—						
August, 1916	(1)	797	650	481	820	713
Pittsburgh—						
August, 1916	(1)	1,373	738	180	585	529
Total;						
August, 1916					1,703	1,508
Rhode Island (State):						
Providence—						
August, 1915	302	375	204	159	(1)	375
August, 1916	269	324	136	248	(1)	324
Texas (municipal):						
Fort Worth—						
August, 1915	115	201	[2] 422	(1)	220	189
August, 1916	187	616	475	27	381	363
South Dakota (Federal-State):						
Huron—						
August, 1916	78	3,691	[2] 1,861	(1)	1,861	1,861
Virginia (municipal):						
Richmond—						
August, 1915	218	355	[2] 526	(1)	367	202
August, 1916	263	547	564	(1)	658	280
Washington (Federal-municipal):						
Tacoma[3]						

[1] Not reported.

[2] Number applying for work.

[3] Figures for this office are carried regularly in the REVIEW under the subject "Federal employment work of the Department of Labor," to which the reader is referred.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, AUGUST, 1915 AND 1916—Concluded.

UNITED STATES—Concluded.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Position filled.
			New registrations.	Renewals.		
Washington (municipal):						
Everett—						
August, 1915	(1)	(1)	(1)	(1)	(1)	173
August, 1916	(1)	705	(1)	(1)	(1)	508
Spokane—						
August, 1915	(1)	(1)	(1)	(1)	1,028	944
August, 1916	2,760	4,231			3,710	3,669
Total:						
August, 1915					1,028	1,117
August, 1916					3,710	4,177

CANADIAN PROVINCIAL EMPLOYMENT BUREAUS.

Province and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Position filled.
			New registrations.	Renewals.		
Quebec (Province):						
Montreal—						
August, 1916	931	(1)	418	(1)	590	506
Quebec—						
August, 1915	(1)	96	[2] 152	(1)	(1)	71
August, 1916	(1)	328	[2] 155	(1)	(1)	104
Total:						
August, 1915					(1)	71
August, 1916					590	610

[1] Not reported.

[2] Number applying for work.

EMPLOYMENT IN SELECTED INDUSTRIES IN AUGUST, 1916.

Continuing information of a like character given in the MONTHLY REVIEW for several months past, there are presented below four tables designed to show the changes in the amount of employment in representative establishments in 10 manufacturing industries between August, 1915, and August, 1916, and between July, 1916, and August, 1916.

It will be noted from the following table that the number of employees in August, 1916, was greater than the number of employees in August, 1915, in all of the 10 industries listed, except in cotton manufacturing and cigar manufacturing. The greatest increase shown is 25.3 per cent for the iron and steel industry. The amount of money paid out to employees in August, 1916, was greater than in August, 1915, in all of the 10 industries. The greatest increase in the amount of money paid out was 50.3 per cent in the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN AUGUST, 1915, AND AUGUST, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for August both years.	Period of pay roll.	Number on pay roll in August—		Per cent of increase (+) or decrease (−).	Amount of pay roll in August—		Per cent of increase (+) or decrease (−).
				1915	1916		1915	1916	
Boots and shoes	86	66	1 week	47,416	56,900	+20.0	$569,856	$738,687	+29.6
Cotton manufacturing.	89	45	do	36,079	35,580	− 1.4	298,530	332,913	+11.5
Cotton finishing	19	14	do	10,000	10,814	+ 8.1	108,467	131,629	+21.3
Hosiery and underwear.	82	50	do	24,337	26,517	+ 9.0	216,659	246,737	+13.9
Woolen	56	40	do	29,199	31,481	+ 7.8	277,445	369,948	+33.3
Silk	64	47	2 weeks	18,378	20,040	+ 9.0	378,923	453,143	+19.6
Men's ready-made clothing.	83	39	1 week	19,041	22,090	+16.0	259,851	355,506	+36.8
Iron and steel	142	98	½ month	130,696	163,783	+25.3	4,076,274	6,125,481	+50.3
Car building and repairing.	80	28	do	27,599	33,871	+22.7	792,490	1,082,099	+36.5
Cigar manufacturing	107	56	1 week	18,240	17,745	− 2.7	185,652	191,348	+ 3.1

In the table that follows, showing the smaller number of establishments reporting the number of employees actually working on the last full day of the reported pay periods, it will be seen that more persons were employed on the specified day in August, 1916, than in August, 1915, in all the industries listed, except in cotton manufacturing and cigar manufacturing. The greatest increase reported (22.7 per cent) was in the iron and steel industry:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN AUGUST, 1915, AND AUGUST, 1916.

Industry.	Establishments reporting for August, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in August—		Per cent of increase (+) or decrease (−).
			1915	1916	
Boots and shoes	37	1 week	20,408	23,018	+12.8
Cotton manufacturing	32	do	21,294	20,912	− 1.8
Cotton finishing	11	do	8,145	8,939	+ 9.7
Hosiery and underwear	15	do	9,972	10,250	+ 2.8
Woolen	39	do	26,835	29,326	+ 9.3
Silk	29	2 weeks	9,300	10,414	+12.0
Men's ready-made clothing	10	1 week	859	896	+ 4.3
Iron and steel	83	½ month	104,788	128,618	+22.7
Car building and repairing	26	do	23,192	27,734	+19.6
Cigar manufacturing	31	1 week	6,874	6,299	− 8.4

An examination of the next table shows that in 3 of the 10 industries listed there was an increase in the number of employees on the pay roll in August, 1916, over July, 1916, but a reduction is shown for the other industries. In the amount of money paid out to employees in wages half of the industries listed show an increase and the other half show a reduction. The greatest increase is 12.2 per cent in the iron and steel industry and the greatest reduction is 5.3 per cent in the woolen industry:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JULY, 1916, AND AUGUST, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for July and August.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
				July, 1916.	August, 1916.		July, 1916.	August, 1916.	
Boots and shoes	86	51	1 week	47,147	46,666	−1.0	$626,291	$612,736	− 2.2
Cotton manufacturing.	89	51	do	39,651	38,826	−2.1	357,064	356,068	− .3
Cotton finishing	19	13	do	8,339	8,417	+ .9	96,627	96,137	− .5
Hosiery and underwear.	82	50	do	27,836	27,421	−1.5	258,277	255,924	− .9
Woolen	56	41	do	33,056	31,644	−4.3	393,106	372,088	− 5.3
Silk	64	46	2 weeks	18,310	18,096	−1.2	387,439	401,566	+ 3.6
Men's ready-made clothing.	83	32	1 week	14,636	14,019	−4.2	188,959	210,567	+11.4
Iron and steel	142	101	½ month	158,848	161,814	+1.9	5,358,951	6,015,415	+12.2
Car building and repairing.	80	24	do	29,090	29,495	+1.4	876,140	965,099	+10.2
Cigar manufacturing	107	55	1 week	18,524	17,362	−6.3	174,778	183,274	+ 4.9

In the next table, which embraces a smaller number of establishments, the hosiery and underwear, iron and steel, and car building and repairing industries show a larger number of employees as actually working on the last full day of the reported pay period in August, 1916, than in July, 1916. A decline in the number of such employees is shown in all the other industries. The greatest reduction is 5.1 per cent, in the boot and shoe industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN JULY, 1916, AND AUGUST, 1916.

Industry.	Establishments reporting for July and August.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			July, 1916.	August, 1916.	
Boots and shoes	26	1 week	14,203	13,478	−5.1
Cotton manufacturing	34	do	22,965	22,752	− .9
Cotton finishing	8	do	6,038	5,906	−2.2
Hosiery and underwear	14	do	10,314	10,316	(1)
Woolen	40	do	30,749	29,489	−4.1
Silk	30	2 weeks	9,229	9,093	−1.5
Men's ready-made clothing	7	1 week	466	459	−1.5
Iron and steel	95	½ month	130,167	132,035	+1.4
Car building and repairing	22	do	23,621	23,797	+ .7
Cigar manufacturing	30	1 week	6,381	6,380	(2)

[1] Increase of less than one-tenth of 1 per cent.

[2] Decrease of less than one-tenth of 1 per cent.

RECENT CHANGES IN WAGE RATES.

Inquiry was made, on the volume of employment schedule sent to reporting establishments, as to changes in wage rates for the period July 15, 1916, to August 15, 1916. In many instances no definite reply was received, and in such cases it is probably safe to assume that there was no change in the wage rates. In the textile industries—cotton manufacturing, cotton finishing, hosiery and underwear, woolen, and silk—as well as in the boot and shoe industry and in cigar manufacturing, wage rates are reported as practically stationary, a total of only four increases being reported from the establishments rendering reports. In the car building and repairing industry, one establishment reports an increase of 20 per cent to 9 per cent of the force and an increase of 3 per cent to 5 per cent of the force. In the men's ready-made clothing industry an increase of 5 per cent to a part of the force is reported by one establishment and an increase of 10 per cent to a part of the force by another establishment. The greatest number of increases in wage rates is reported for the iron and steel industry. Three establishments report increases ranging from 5 to 16⅔ per cent to all employees. Twelve establishments report increases ranging from 5 to 16⅔ per cent to a part of the force, the high rate being reported in several cases for puddlers. One establishment reports an increase in rate to furnace men of 15 cents a day to 12-hour men and 10 cents a day to 10-hour men.

STRIKES AND LOCKOUTS, MARCH TO AUGUST, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the six months March to August, 1916, inclusive, was 2,006. The number similarly compiled during the corresponding months of the year 1915 was 633. The total number of strikes recorded for the eight months of 1916 is 2,329.

The following table shows the number of strikes and lockouts begun in each of the months March to August, 1916, inclusive, together with 174 strikes and lockouts reported as having occurred during that period, although the month in which they began was not reported. The number of strikes compiled during the corresponding months of the year 1915 is also given. In comparing these figures it must be borne in mind that, although the number of strikes in 1916 has undoubtedly been larger than those in the corresponding months of 1915, the sources of the bureau in obtaining data in regard to strikes have also increased, and the difference between the two years is therefore not so great as the figures would tend to show. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, MARCH TO AUGUST, INCLUSIVE, 1916 AND 1915.

Kind of dispute.	March.	April.	May.	June.	July.	August.	Month not stated.	Total.
Strikes:								
1916	218	320	500	260	251	222	165	1,936
1915	75	91	111	54	94	138	....	563
Lockouts:								
1916	8	13	16	16	2	6	9	70
1915	14	16	11	6	14	9	....	70
Total:								
1916	226	333	516	276	253	228	174	2,006
1915	89	107	122	60	108	147	....	633

The above columns include disputes that began in the months indicated only, and are subjected to monthly revision. More detailed accounts of the disputes reported for each month preceding August may be found in former numbers of the REVIEW.

DISPUTES REPORTED DURING AUGUST, 1916.

The number of strikes during August shows a decrease from that during the preceding four months. Probably the strike that attracted the greatest amount of attention was that of the street-railway men in New York City. Others of prominence were those of the miners in Pennsylvania, Ohio, and Arkansas; the culinary workers in San Francisco; the machinists in Ohio, Illinois, Massachusetts, and Connecticut; the freight handlers in Chicago; the cigar makers, leather workers, barbers, raincoat workers, and paper-box manufacturers in New York City; textile workers in Massachusetts, Rhode Island, and Pennsylvania; silk workers in New Jersey; milk drivers in St. Louis and Cleveland; ice drivers in Memphis; shoemakers in New Hampshire, Massachusetts, and New York City; and coal-dock laborers at Superior and Duluth.

The data in the following tables relate to 335 strikes and lockouts concerning which information was received by the bureau during the month of August. These include, in addition to the 228 strikes and lockouts which began in August, 104 strikes and 3 lockouts which were reported during the month, but began as follows: 54 strikes and 2 lockouts in July, 14 strikes in June, 6 strikes in May, 1 strike in April, and 29 strikes and 1 lockout the dates of commencement of which were not reported, but most of which probably occurred in July or August. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for August will show an increase over the number of strikes herein reported for that month.

Of the disputes reported during August, 18 strikes and 1 lockout occurred east of the Mississippi and south of the Ohio and Potomac rivers, 38 strikes and 1 lockout west of the Mississippi, and the remaining 270 strikes and 7 lockouts in the district north of the Ohio and Potomac rivers and east of the Mississippi. More than one-half of these strikes occurred in four States.

STATES IN WHICH FIVE OR MORE STRIKES AND LOCKOUTS WERE REPORTED DURING AUGUST, 1916.

State.	Strikes.	Lockouts.	Total.
Pennsylvania	60	....	60
New York	50	4	54
Ohio	33	2	35
Massachusetts	28	....	28
New Jersey	25	....	25
Illinois	23	....	23
Connecticut	13	....	13
Wisconsin	10	....	10
Missouri	9	1	10
Rhode Island	8	....	8
Texas	7	....	7
Indiana	6	....	6
Maryland	5	1	6
25 other States	49	1	50
Total	326	9	335

The strikers were men in all but 15 strikes, which were confined to women, 10 strikes which included both men and women, and 19 strikes and 2 lockouts in which the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING AUGUST, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades	54	2	56
Mining	55	....	55
Textile workers	31	....	31
Clothing industries	25	1	26
Building trades	24	....	24
Railroads	12	....	12
Teamsters	9	3	12
City laborers	10	....	10
Cooks and waiters	9	....	9
Paper workers	7	2	9
Street railways	7	....	7
Chemical workers	6	....	6
Clay workers	6	....	6
Iron and steel mills	6	....	6
Bakers	4	....	4
Cigar makers	4	....	4
Furniture workers	4	....	4
Moving picture operators	4	....	4
All others	49	1	50
Total	326	9	335

Included in the above are 24 strikes of machinists, 15 of metal polishers, and 6 of molders; 53 of the mining strikes were in coal mines.

In 185 strikes and 8 lockouts the employees were connected with unions; in 10 strikes and 1 lockout they were not so connected; in 7 strikes they were not connected with unions at the time of striking, but became organized during the course of the strike; in the remaining 124 strikes it was not stated whether the strikers had union affiliation or not.

The following table shows the causes of 257 of the strikes and lockouts. In nearly 70 per cent of these the questions of wages or hours, or both, were prominent.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING AUGUST, 1916

Cause.	Strikes.	Lockouts.	Total.
For increase of wages	88	1	89
Because of reduction of wages	3		3
For increase of hours	18	1	19
For increase of wages and decrease of hours	39		39
Because of unpaid wages	4		4
General conditions	5	1	6
Conditions and wages	6		6
Conditions, wages, and hours	1		1
Recognition of the union	13	3	16
Recognition and wages	9	1	10
Recognition and hours	2		2
Recognition, wages, and hours	7		7
Because of discharge of employees	14		14
Because of presence of nonunion men	33		33
In regard to the agreement	3		3
Jurisdictional	1		1
Sympathy	1		1
Want foremen discharged	3		3
Miscellaneous	22	1	23
Not reported	54	1	55
Total	326	9	335

In 192 of the strikes the number of persons involved was reported to be 158,293, an average of 824 per strike. In 33 strikes, in each of which the number involved was over 1,000, the strikers numbered 127,100, thus leaving 31,193 involved in the remaining 159 strikes, or an average of 196 in each. In 4 lockouts the number reported to be involved was 4,063, ranging from 3 to 3,500 in each.

In 246 strikes and 6 lockouts only one employer was concerned in each disturbance; in 10 strikes, 2 employers; in 4 strikes, 3 employers; in 25 strikes and 2 lockouts, more than 3; in 41 strikes and 1 lockout the number of employers was not stated.

In 90 strikes reported as ending in August, 25 were won, 13 lost, 27 compromised; in 5 the strikers returned to work under promise of the employer to arbitrate the matter in dispute; in 20 the result was not reported. No lockouts were reported as ending in August. The duration of 60 of these strikes was given as follows: One day or less, 5; 2 to 3 days, 13; 4 to 7 days, 15; 1 to 2 weeks, 9; 3 to 4 weeks, 10; 1 to 3 months, 8. The duration of the 60 strikes was 892 days, or an average of 15 days each.

ARBITRATION OF RAILROAD LABOR DISPUTES.

In response to a resolution adopted by the Senate on May 3, 1916, the United States Board of Mediation and Conciliation prepared and filed on May 12, 1916, a report setting forth in detail the history of all railroad labor arbitrations, including the effect in each instance upon the rates of pay and working conditions of employees.[1] The report includes an analysis of 21 arbitration proceedings held under the provisions of Federal law, and in addition 4 arbitration proceedings not conducted under the provisions of law, covering the period 1898 to 1915. In the tables presented in connection with each case a comparison has been made between rates of pay and working conditions prior and subsequent to the award of the arbitration boards. The general plan followed in the presentation of each case is as follows: (1) History of the case; (2) articles of the arbitration agreement; (3) testimony and argument of the employees; (4) testimony and argument of the railroads; (5) comparison of requests of employees with award of the arbitration board; (6) the application of the award of the board to railroad operating conditions, and (7) changes in the rates of pay and working conditions by individual railroads as the result of the arbitration award.

The first law dealing with the adjustment of labor controversies between the transportation companies and the employees was approved October 1, 1888. It provided for voluntary arbitration and, substantially, for compulsory investigation. No provision was made for enforcing any award of the board of arbitration and the provisions of the act were never utilized. This law was superseded in June, 1898, by the so-called Erdman Act. It included only employees directly engaged in the movement of trains—engineers, firemen, conductors, trainmen, switchmen, and telegraphers. Mediation was purely voluntary, and the mediators had no power to intervene on their own initiative. During the first eight and one-half years following the passage of this law only one attempt was made to utilize it, but within the next five years its provisions were invoked more than sixty times, thus establishing the effectiveness of the law and fully developing methods of procedure under its provisions. The next step in legislation relative to mediation and arbitration was the passage of the so-called Newlands law, approved July 15, 1913. It created the offices of commissioner of mediation and conciliation and assistant commissioner of mediation and conciliation, and further provided that the President shall also "designate not more than two other officials of the Government who have been appointed by and with the advice and consent of the Senate, who, together with the commissioner of mediation and conciliation, shall constitute a board to be known as the United States Board of Mediation and Conciliation."

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[1] Railroad labor arbitrations. Report of the United States Board of Mediation and Conciliation on the effects of arbitration proceedings upon rates of pay and working conditions of railroad employees. Prepared under the direction of the Board by W. Jett Lauck. S. Doc. 493, 64th Cong., 1st sess. Washington, 1916, 608 pp.

The law in general reenacted the provisions of the Erdman law relative to mediation. It also provided for three-member boards of arbitration as authorized by the Erdman Act, but, in addition, in order to meet the criticism that three-member boards placed too much power in the hands of the neutral arbitrator, it provided further for six-member boards of arbitration, composed of two representatives from each party to a controversy, and two neutral members representing the public.

The immediate cause for the passage of the present law grew out of the demands of the conductors and trainmen which had been presented, in a concerted movement, some months previously, to 42 eastern railroads in what is known as eastern associated territory. The direct negotiations between the parties resulted in a refusal by the railroads to grant the demands of the men, on the ground that the rates of wages prevailing were adequate and that the employees were working under favorable conditions. In accordance with the usual procedure a strike vote was then taken, resulting in some 97 per cent of the employees voting to authorize their representatives to order withdrawal from the service of the railroads unless their demands were complied with. In this emergency Congress enacted the Newlands law.

The case just cited was thus the first one arbitrated under the Newlands law. On July 26, 1913, the parties agreed to arbitrate, and six arbitrators were selected. The first hearing was held on September 11, in New York city, and the award was made on November 10, following. In this controversy 42 railroads and about 20,000 conductors and 70,000 trainmen were involved.

Under the operation of the various laws mediation appears to have taken the leading part. The report of Commissioner Neill[1] shows that there were in all 48 cases in which the services of the mediators were invoked under the Erdman law from June 23, 1899, to December 31, 1911. Seven of these cases were concerted movements, involving many of the various classes of employees and, in each instance, a large number of railroads, in one case as many as 64 roads. Of these 48 cases coming under the Erdman law up to the end of 1911, 20 were settled through mediation, 8 were settled by mediation and arbitration, and 4 by arbitration alone. In the remaining 16 cases the services of the mediators, requested by one of the parties, were either refused by the other or direct settlements were reached between the parties after the services of the mediators had been invoked without employing them or resorting to arbitration.

Since the Newlands law was approved, 56 controversies have been adjusted by the Board of Mediation and Conciliation. Of this number, 45 were settled by mediation and 11 by mediation and arbitration. In 20 cases employees made application to the board for its services, the railroads applied in 13 cases, and in 15 cases the railroads and their employees made joint application. In 8 cases the board proffered its services, which were accepted.

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[1] Bulletin of the United States Bureau of Labor, No. 98.

Before entering upon an analysis of certain cases the report presents a table showing the arbitration proceedings under the Erdman law, including cases where mediation was first invoked and cases of arbitration direct, from June 1, 1898, to December 31, 1911, and a table giving the arbitrations under the Newlands law during the fiscal year ended June 30, 1915. In connection with each case the date of the award is shown, together with the members of the arbitration boards, the place of meeting, and the duration of the proceedings.

The report here under review contains no general summary, but is limited to a study of the effects of arbitration proceedings taken individually upon rates of pay and working conditions. Increases in rates of pay and improvements in working conditions secured through mediation are not included.

EIGHT-HOUR LAW FOR CERTAIN RAILROAD EMPLOYEES.

A statute that has attracted particular attention both on account of its provisions and of the circumstances under which it was enacted, entitled "An act to establish an eight-hour day for employees of carriers engaged in interstate and foreign commerce, and for other purposes," received presidential approval on September 3, 1916. The first eight-hour legislation of Congress was enacted in 1868, relating to the employment of labor on public works. It was held to be directory and not mandatory, so that it was of little practical effect. However, subsequent legislation has established the principle of a restricted eight-hour day for employees on public works, overtime being forbidden except in cases of emergency. Similarly restrictive and prohibitory is the 16-hour law for employees on railroads, with 9-hour and 13-hour limitations for train dispatchers using the telegraph or telephone. The eight-hour day as prescribed by State legislation for certain dangerous occupations is likewise restrictive, overtime work being forbidden. The present statute differs from the foregoing in that it declares that " eight hours shall, in contracts for labor and service, be deemed a day's work and the measure or standard of a day's work for the purpose of reckoning the compensation " of certain employees in interstate commerce. Overtime work is not forbidden and may extend up to the limitations prescribed by the 16-hour law noted above, but work in excess of eight hours must be paid at a rate not less than the pro rata rate for the standard 8-hour workday. A commission is appointed to

observe the operation of the law and must report not sooner than 6 months nor later than 9 months from January 1, 1917; and pending the report of the commission and for 30 days thereafter no reduction may be made in the present standard day's wage.

PUBLIC—No. 252—SIXTY-FOURTH CONGRESS.

[H. R. 17700.]

SECTION 1. Beginning January first, nineteen hundred and seventeen, eight hours shall, in contracts for labor and service, be deemed a day's work and the measure or standard of a day's work for the purpose of reckoning the compensation for services of all employees who are now or may hereafter be employed by any common carrier by railroad, except railroads independently owned and operated not exceeding one hundred miles in length, electric street railroads, and electric interurban railroads, which is subject to the provisions of the act of February fourth, eighteen hundred and eighty-seven, entitled "An act to regulate commerce," as amended, and who are now or may hereafter be actually engaged in any capacity in the operation of trains used for the transportation of persons or property on railroads, except railroads independently owned and operated not exceeding one hundred miles in length, electric street railroads, and electric interurban railroads, from any State or Territory of the United States or the District of Columbia, to any other State or Territory of the United States or the District of Columbia, or from one place in a Territory to another place in the same Territory, or from any place in the United States to an adjacent foreign country, or from any place in the United States through a foreign country to any other place in the United States: *Provided*, That the above exceptions shall not apply to railroads though less than one hundred miles in length whose principal business is leasing or furnishing terminal or transfer facilities to other railroads, or are themselves engaged in transfers of freight between railroads or between railroads and industrial plants.

SEC. 2. The President shall appoint a commission of three, which shall observe the operation and effects of the institution of the eight-hour standard workday as above defined and the facts and conditions affecting the relations between such common carriers and employees during a period of not less than six months nor more than nine months, in the discretion of the commission, and within thirty days thereafter such commission shall report its findings to the President and Congress; that each member of the commission created under the provisions of this act shall receive such compensation as may be fixed by the President. That the sum of $25,000, or so much thereof as may be necessary, be, and hereby is, appropriated, out of any money in the United States Treasury not otherwise appropriated, for the necessary and proper expenses incurred in connection with the work of such commission, including salaries, per diem, traveling expenses of members and employees, and rent, furniture, office fixtures and supplies, books, salaries, and other necessary expenses, the same to be approved by the chairman of said commission and audited by the proper accounting officers of the Treasury.

SEC. 3. Pending the report of the commission herein provided for and for a period of thirty days thereafter the compensation of railway employees subject to this act for a standard eight-hour workday shall not be reduced below the present standard day's wage, and for all necessary time in excess of eight hours such employees shall be paid at a rate not less than the pro rata rate for such standard eight-hour workday.

SEC. 4. Any person violating any provision of this act shall be guilty of a misdemeanor and upon conviction shall be fined not less than $100 and not more than $1,000, or imprisoned not to exceed one year, or both.

Approved, September 3, 1916.
Approved, September 5, 1916.

LEGAL REGULATION OF LENGTH OF WORKING-DAY.

EIGHT HOURS.

Public employees and employees on public works (30 States and Territories).—District of Columbia, Alaska, Arizona, California, Colorado, Idaho, Indiana, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, Utah, Washington, West Virginia, Wisconsin, Wyoming, Hawaii, Porto Rico, and the United States. The 8-hour day for public employees is fixed by the constitutions of Arizona, California, Idaho, Montana, New Mexico, Ohio, Oklahoma, Utah, and Wyoming.

Mines (14 States).—Alaska, Arizona, California, Colorado, Idaho, Missouri, Montana, Nevada, Oklahoma, Oregon, Pennsylvania, Utah, Washington, and Wyoming.

Smelters, reduction works, etc. (9 States).—Alaska, Arizona, California, Colorado, Idaho, Missouri, Montana, Utah, and Wyoming.

Electric light and power plants (1 State).—Arizona.

Coke ovens (3 States).—Alaska, Arizona, and Colorado.

Blast furnaces (2 States).—Arizona and Colorado.

Cement and plaster mills (2 States).—Arizona and Nevada.

Plate-glass works (1 State).—Missouri.

Rolling, rod, and stamp mills (5 States).—Alaska, Arizona, Colorado, Idaho, and Wyoming.

Tunnels (3 States).—Arizona, California, and Montana.

High-air pressure (2 States).—New Jersey and New York.

Irrigation works (1 State).—Montana.

Railroad telegraphers (6 States).—Arkansas, Connecticut, Maryland, Nevada, Texas, and West Virginia.

Day's work unless otherwise stipulated (9 States).—California, Connecticut, Illinois, Indiana, Missouri, New York, Ohio, Pennsylvania, and Wisconsin.

NINE HOURS.

Railroad telegraphers (5 States).—District of Columbia, Nebraska, North Carolina, Oregon, and the United States.

Telephone operators (1 State).—Montana.

Street railways (1 State).—Massachusetts.

Interlocking-tower operators, railroad (1 State).—Missouri.

TEN HOURS.

Saw and planing mills (1 State).—Arkansas.

Bakeries (1 State).—New Jersey.

Brickyards (corporation) (1 State).—New York.

Drug stores (2 States).—California and New York.[1]

Cotton and woolen mills (2 States).—Georgia and Maryland.

Manufacturing establishments (1 State).—Mississippi.

Street railways (5 States).—Louisiana, New York, Rhode Island, and Washington.

Day's work unless otherwise stipulated (7 States).—Florida, Maine, Michigan, Minnesota, Nebraska, New Hampshire, and Rhode Island.

ELEVEN HOURS.

Grocery stores (1 State).—New York.

TWELVE HOURS.

Railroad telegraphers.—Island of Porto Rico.

Railroad trainmen.—Island of Porto Rico.

Street railways (5 States).—California, Maryland, New Jersey, Pennsylvania, and South Carolina.

These States have no provision in law for the limit of a day's work: Alabama, Delaware, Iowa, North Dakota, Tennessee, Vermont, and Virginia.

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[1] Seventy hours per week, 6 hours overtime allowed to make shorter succeeding week; not over 132 hours in any two consecutive weeks.

THIRTEEN HOURS.

Railroad trainmen (2 States).—Florida and Georgia.

FOURTEEN HOURS.

Railroad trainmen (1 State).—Oregon.

FIFTEEN HOURS.

Railroad trainmen (1 State).—Ohio.

Railroad telegraphers (1 State).—Ohio.

Street railways (1 State).—Ohio.

SIXTEEN HOURS.

Railroad trainmen (21 States).—Arizona, Arkansas, California, Colorado, District of Columbia, Indiana, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, New York, North Carolina, North Dakota, South Dakota, Texas, Washington, Wisconsin, and the United States.

Railroad telegraphers (7 States).—Arizona, California, Colorado, Indiana, Kansas, Missouri, and Montana.

TWENTY-FOUR HOURS.

Railroad trainmen (1 State).—Michigan.

NOTE.—A Federal statute fixes the hours of labor of railroad trainmen at 16 per day, and of train dispatchers and railroad telegraph operators at 9 per day (13 hours in offices, etc., operated only in the daytime). Decisions of the United States Supreme Court and of the State courts hold State laws fixing a different standard to be void and unconstitutional in so far as interstate commerce is concerned; some courts also hold that a distinction between interstate and intrastate operations is impracticable, so that no law fixing a different standard is valid. Laws thus held void are those of Missouri, New York, Washington, and Wisconsin. The Federal statute enacted at the session of Congress just closed, "to establish an eight-hour day," does not restrict employment to eight hours, but makes the eight-hour day the measure for the payment of wages.

LAW AND ORDER IN INDUSTRY.[1]

Prior to the summer of 1910 the garment makers in New York City had been working under conditions which to them seemed hopelessly unfair and unjust, and failure on the part of the manufacturers to remedy the situation culminated in a strike involving approximately 15,000 employers and nearly 60,000 workers. To terminate the strike the Cloak, Suit, and Skirt Manufacturers' Protective Association and certain locals of the International Ladies' Garment Makers' Union entered into a collective agreement, known as the "protocol," which established a minimum scale for week workers, maximum hours, number of holidays to be observed, limitation of hours of overtime, prohibition of home work, requirement for electric instead of foot power, etc. Other provisions were the "preferential union shop," a board of arbitration, a board of sanitary control upon which the public had representation, and a board of grievances.

The history of the protocol and a discussion of the difficulties attending the workings of the institutions created by it, together with an outline of some of the business difficulties inherent in the cloak and suit industry, a discussion of the important principle of discrimination among workers and freedom of selection on the basis of skill—in other words, the preferential union shop—and, finally, the advocacy of the creation of a representative national industrial board whose duty should be to certify any agreement "voluntarily come to" between employers and employees in order to guarantee the majority "against the undermining of standards by unscrupulous competitors," are set forth in a book entitled "Law and Order in Industry."[1]

The book is largely devoted to the history of the events which culminated in the protocol, and the subsequent experience under its provisions. "The protocol undertook to better industrial conditions by rational and peaceable methods. Upon the sanitary side it succeeded. Upon the business side, while it did not wholly fail, it did not meet the expectations of those who framed it."

The author draws some inferences from the experience in the cloak situation which he believes demonstrate conclusively that "the faith in collective bargaining is justified and that the system is practicable, provided adequate machinery is established and there is leadership on both sides fully expressing the spirit of the arrangement." In discussing the making of collective agreements generally, the author takes up in some detail the question of recognition of the union and suggests that—

> Perhaps the cause of more conflicts than any other of those mentioned is the "closed shop." The "preferential union shop" established through the protocol of 1910 would seem to furnish the modus vivendi for elimination of this obstacle.

Two other obstacles are suggested: (1) Contract breaking and (2) acts of violence against nonunion workers and the properties of employers, and in conclusion it is asserted that—

> Industrial peace and welfare is not to be secured by acquiescence in violence as a method, nor by attacking personally individual employers, or even the whole class. Employers generally already are aware of the value of collective bargaining to society generally. They accept it in theory and in principle. What they want to know is how to run business by it. We will get more collective agreements when we solve the problem of enforcement of standards. Those who from the outside believe in the social value of joint agreements between unions and employers' associations must not rely upon violence or law breaking as the means for securing them. They must face the business factors squarely. When we shall do this we shall make progress.

The author suggests that by the formation of a national industrial board constituted of leaders of the trade-unions, employers, and public men and women, we would find a method for "applying intelligently and constantly to trade agreements the force of public opinion and at the same time utilize Federal power in making such agreements [wages, hours, conditions of employment, etc.], 'voluntarily come to' binding upon the unscrupulous and illegitimate minority employer" thus "rendering the entire country a real service" and hastening the "day of industrial welfare as well as industrial peace."[1]

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[1] Law and Order in Industry, by Julius Henry Cohen. The Macmillan Co., New York, 1916. 292 pp.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor Statistics from approximately 725 retail dealers in 44 of the principal industrial cities of the United States show a decline of less than 1 per cent from June 15 to July 15, 1916, in the combined price of the principal articles of food. This movement was largely due to the decline in the price of beef. The prices of pork and lard, however, made slight advances. The most marked changes were in potatoes, which declined 19 per cent; eggs, which advanced 7 per cent, and beans, which advanced 21 per cent.

The table which follows shows the relative retail prices on June 15 and July 15, 1916, of 26 articles covered by the bureau's reports, together with the average money prices on the same dates. The plus and minus signs are used to indicate that the exact figure was slightly more or slightly less than the average money price carried to three places or the relative price with the terminal decimals dropped. Thus, the relative price of all articles combined was but a fraction more than 109 for June 15, 1916, and a fraction less than 109 for July 15, 1916.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON JUNE 15 AND JULY 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price.		Relative price (average price for the year 1915=100).	
		June 15, 1916.	July 15, 1916.	June 15, 1916.	July 15, 1916.
Sirloin steak	Pound	$0.286−	$0.283+	112+	111+
Round steak	do	.257+	.257+	113+	113−
Rib roast	do	.224	.220	112−	110+
Chuck roast	do	.180+	.177+	112−	110+
Plate boiling beef	do	.134−	.131+	110−	108+
Pork chops	do	.232−	.236−	114+	116−
Smoked bacon	do	.292+	.295+	107	108−
Smoked ham	do	.292−	.294+	113+	114−
Lard, pure	do	.172−	.175−	116	118−
Hens	do	.244−	.241+	117−	116−
Canned salmon	do	.202	.202	101−	101
Eggs, strictly fresh	Dozen	.295−	.315−	88	94−
Butter, creamery	Pound	.367+	.360+	102−	100−
Cheese	do	.245−	.243−	106−	105
Milk, fresh	Quart	.090	.090	100	100+
Flour, wheat	⅛-barrel bag.	.933+	.923+	93+	92+
Corn meal	Pound	.031+	.031+	100−	100−
Rice	do	.091−	.091−	100+	100+
Potatoes	Peck	.429−	.346+	187	151−
Onions	Pound	.054+	.053+	157−	154−
Beans, navy	do	.096−	.116−	124	150
Prunes	do	.130+	.131+	98+	99−
Raisins, seeded	do	.127−	.128+	101+	102−
Sugar, granulated	do	.087+	.088−	132−	133+
Coffee	do	.302−	.302−	100−	100−
Tea	do	.551+	.551+	100+	100+
All articles combined				109+	109−

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[1] In this connection it is of interest to compare the recommendations of the industrial council of the British Board of Trade in regard to industrial agreements. See Bulletin of the U. S. Bureau of Labor Statistics, No. 133.

The table below shows the average money prices and the relative prices of the same 26 articles on July 15 of each year from 1912 to 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON JULY 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of July in each year was of the average price for the year 1915.]

Article.	Unit.	Average money price July 15—					Relative price July 15—				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.242+	$0.263−	$0.268−	$0.265+	$0.283+	95	103−	105+	104−	111+
Round steak	do	.207+	.230−	.241+	.237−	.257+	91−	101−	106+	104+	113−
Rib roast	do	.194	.202	.208	.204	.220	97−	101−	104−	102+	110+
Chuck roast	do	....	....	.172+	.164+	.177+	.....	.....	107+	102+	110+
Plate boiling beef	do	....	....	.127−	.123−	.131+	.....	.....	104−	101−	108+
Pork chops	do	.193+	.218−	.224−	.211+	.236−	95+	107	110+	104+	116−
Smoked bacon	do	.246−	.284+	.279−	.276−	.295+	90+	104−	102−	101−	108−
Smoked ham	do	.243−	.276+	.274−	.261−	.294+	94+	107+	106+	101−	114−
Lard, pure	do	.148−	.160−	.154−	.146+	.175−	100+	108−	104+	99+	118−
Hens	do	.200−	.219−	.221−	.206+	.241+	96−	105−	106−	99+	116−
Canned salmon	do	....	....	....	.200	.202	.....	.....	.....	100	101
Eggs, strictly fresh	Dozen	.278+	.295−	.298+	.275−	.315−	83+	88−	89−	82	94−
Butter, creamery	Pound	.339−	.349+	.346−	.346−	.360+	94+	97+	96−	96+	100−
Cheese	do	....	....	....	.231−	.243−	.....	.....	.....	100−	105
Milk, fresh	Quart	.087+	.090	.090	.089+	.090	97−	100−	100+	99+	100+
Flour, wheat	⅛-barrel bag.	.873−	.803−	.783−	.993+	.923+	87−	80+	78	99+	92+
Corn meal	Pound	.030+	.028+	.030−	.031+	.031+	96−	91−	95+	100	100−
Rice	do	....	....	....	.091−	.091−	.....	.....	.....	100+	100+
Potatoes	Peck	.328−	.284+	.401+	.218−	.346+	143+	124	175−	95+	151−
Onions	Pound	....	....	....	.035−	.053+	.....	.....	.....	101+	154−
Beans, navy	do	....	....	....	.076−	.116−	.....	.....	.....	98−	150
Prunes	do	....	....	....	.133−	.131+	.....	.....	.....	100+	99−
Raisins, seeded	do	....	....	....	.126−	.128+	.....	.....	.....	100−	102−
Sugar, granulated	do	.062+	.055−	.052+	.070−	.088−	94	83+	79+	106−	133+
Coffee	do	....	....	....	.302−	.302−	.....	.....	.....	100	100−
Tea	do	....	....	....	.551+	.551+	.....	.....	.....	100+	100+
All articles combined	....	....	....	....	....	....	**94+**	**98−**	**101−**	**99+**	**109−**

A comparison of prices from July 15, 1912, to July 15, 1916, shows an advance in the price of all articles combined of 16 per cent, each article for which prices were carried for the 5-year period showing an advance.

Round steak advanced 24 per cent from July 15, 1912, to July 15, 1916, which was a greater advance than shown for any other meat, and sugar advanced 41 per cent, a greater advance than made by any other article.

From July 15, 1915, to the same date in 1916 there was an advance in all articles combined of 10 per cent. The only article which made any noticeable decline in price was flour, 7 per cent. Sugar advanced 25 per cent, and all meats advanced, from bacon 7 per cent, to hens, 17 per cent.

RETAIL PRICES OF BREAD.

A résumé of the price of bread in a few selected cities in the United States for August 15, 1916, and for the same date in the three preceding years is given herewith, compiled from reports received by the Bureau of Labor Statistics from leading bakers in these cities.

The prices given are the computed prices of a loaf scaled at 16 ounces—that is, 16 ounces of dough—based on reports of the actual scaling weights of the 5-cent loaf sold. While it would be highly desirable to present the price of the loaf as actually purchased by the consumer, the complications involved in the relation of the scaled weight to the weight of the bread when it passes over the retailer's counter were found to be such that it was impossible to do so. The loss of weight in baking varies with the formula, with the style of loaf, and with the temperature of the oven. Furthermore, the weight, of course, varies with the time intervening between the removal of the loaf from the oven and its delivery to the consumer, the loss by evaporation also being partly determined by the conditions under which the bread is kept and by the state of the atmosphere.

The customary loss in baking is variously estimated by bakers, but it may be said that a loaf weighing 16 ounces before baking will, when baked and cooled, weigh about 14½ ounces.

It must be borne clearly in mind that the price of bread varies with the kind of bread and the quality of materials used in its composition.

No fancy, special, graham, rye, or restaurant breads are included in these prices.

The following table shows the price of a loaf of bread weighing 16 ounces before baking in 16 important industrial cities of the United States on August 15 of each year 1913, 1914, 1915, and 1916. For instance, the weight of the 5-cent loaf as reported from Atlanta varied so that the price of a loaf weighing 16 ounces before baking was 5.6 cents on August 15, 1913; 5.4 cents on August 15, 1914; 6.1 cents on August 15, 1915, and 6.3 cents on August 15, 1916.

PRICE OF A LOAF OF BREAD WEIGHING 16 OUNCES BEFORE BAKING ON THE 15TH OF AUGUST, 1913 TO 1916.

City.	Price of loaf on—			
	August 15, 1913.	August 15, 1914.	August 15, 1915.	August 15, 1916.
Atlanta, Ga	$0.056	$0.054	$0.061	$0.063
Baltimore, Md	.050	.050	.057	.056
Birmingham, Ala	.047	.049	.054	.057
Chicago, Ill	.052	.053	.058	.058
Cincinnati, Ohio	.043	.044	.052	.051
Cleveland, Ohio	.050	.051	.054	.056
Dallas, Tex	.051	.050	.060	.060
Denver, Colo	.049	.048	.055	.057
Minneapolis, Minn	.050	.050	.058	.057
New Haven, Conn	.053	.053	.056	.057
New Orleans, La	.044	.041	.049	.048
New York, N. Y	.055	.059	.060	.059
Portland, Oreg	.049	.049	.055	.054
St. Louis, Mo	.049	.050	.062	.067
San Francisco, Cal	.054	.054	.057	.056
Washington, D. C	.052	.051	.056	.059

Prices on August 15, 1913, and August 15, 1914, were not materially different, but from August 15, 1914, to August 15, 1915, there were very noticeable changes. In every city there was an advance. The greatest advance was in St. Louis, but there was a greater decline in St. Louis from August 15, 1915, to August 15, 1916, than in any other of the 16 cities.

From August 15, 1915, to August 15, 1916, there was an increase in the price of bread in 6 of the cities and a decrease in 8 cities, while in 2 cities the price was the same on the two dates.

FEDERAL CHILD-LABOR LAW.

The Sixty-fourth Congress at its session just closed enacted a law entitled "An act to prevent interstate commerce in the products of child labor, and for other purposes." The purpose of the act is in brief to prevent the interstate shipment of the products of any mine or quarry in which children under the age of 16 years have been employed, or the products of any manufacturing establishment in which children under 14 years of age have been employed, or in which children between the ages of 14 and 16 years have worked more than eight hours in any day, or more than six days in any week, or have been employed at nightwork. This enactment marks the culmination of demands extending over a number of years, apparently the first bill of this intent being an amendment offered by Senator Beveridge, of Indiana, on January 23, 1907, to a bill then before Congress, the object of which was to regulate the employment of children in the District of Columbia. This amendment fell far short of the completeness of the present act, as did other bills introduced in succeeding Congresses. In the Sixty-third Congress a bill on this subject passed the House of Representatives, and was referred to the Senate Committee on Interstate Commerce; this committee reported the bill with amendments, but no further action was taken. The present act received the earnest support of the President, passing the House by a vote of 337 yeas to 46 nays, and the Senate by a vote of 52 to 12, receiving the presidential approval September 1, 1916.

The act follows:

PUBLIC—No. 249—SIXTY-FOURTH CONGRESS.

(H. R. 8234.)

SECTION 1. No producer, manufacturer, or dealer shall ship or deliver for shipment in interstate or foreign commerce any article or commodity the product of any mine or quarry, situated in the United States, in which within thirty days prior to the time of the removal of such product therefrom children under the age of sixteen years have been employed or permitted to work, or any article or commodity the product of any mill, cannery, workshop, factory, or manufacturing establishment, situated in the United States, in which within thirty days prior to the removal of such product therefrom children under the age of fourteen years have been employed or permitted to work, or children between the ages of fourteen years and sixteen years have been employed or permitted to work more than eight hours in any day, or more than six days in any week, or after the hour of seven o'clock postmeridian, or before the hour of six o'clock antemeridian: *Provided*, That a prosecution and conviction of a defendant for the shipment or delivery for shipment of any article or commodity under the conditions herein prohibited shall be a bar to any further prosecution against the same defendant for shipments or deliveries for shipment of any such article or commodity before the beginning of said prosecution.

SEC. 2. The Attorney General, the Secretary of Commerce, and the Secretary of Labor shall constitute a board to make and publish from time to time uniform rules and regulations for carrying out the provisions of this act.

SEC. 3. For the purpose of securing proper enforcement of this act the Secretary of Labor, or any person duly authorized by him, shall have authority to enter and inspect at any time mines, quarries, mills, canneries, workshops, factories, manufacturing establishments, and other places in which goods are produced or held for interstate commerce; and the Secretary of Labor shall have authority to employ such assistance for the purposes of this act as may from time to time be authorized by appropriation or other law.

SEC. 4. It shall be the duty of each district attorney to whom the Secretary of Labor shall report any violation of this act, or to whom any State factory or mining or quarry inspector, commissioner of labor, State medical inspector, or school-attendance officer, or any other person shall present satisfactory evidence of any such violation to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States without delay for the enforcement of the penalties in such cases herein provided: *Provided*, That nothing in this act shall be construed to apply to bona fide boys' and girls' canning clubs recognized by the Agricultural Department of the several States and of the United States.

SEC. 5. Any person who violates any of the provisions of section one of this act, or who refuses or obstructs entry or inspection authorized by section three of this act, shall for each offense prior to the first conviction of such person under the provisions of this act, be punished by a fine of not more than $200, and shall for each offense subsequent to such conviction be punished by a fine of not more than $1,000, nor less than $100, or by imprisonment for not more than three months, or by both such fine and imprisonment, in the discretion of the court: *Provided*, That no dealer shall be prosecuted under the provisions of this act for a shipment, delivery for shipment, or transportation who establishes a guaranty issued by the person by whom the goods shipped or delivered for shipment or transportation were manufactured or produced, resident in the United States, to the effect that such goods were produced or manufactured in a mine or quarry in which within thirty days prior to their removal therefrom no children under the age of sixteen years were employed or permitted to work, or in a mill, cannery, workshop, factory, or manufacturing establishment, in which within thirty days prior to the removal of such goods therefrom no children under the age of fourteen years were employed or permitted to work, nor children between the ages of fourteen years and sixteen years employed or permitted to work more than eight hours in any day or more than six days in any week or after the hour of seven o'clock postmeridian or before the hour of six o'clock antemeridian; and in such event, if the guaranty contains any false statement of a material fact, the guarantor shall be amenable to prosecution and to the fine or imprisonment provided by this section for violation of the provisions of this act. Said guaranty, to afford the protection above provided, shall contain the name and address of the person giving the same: *And provided further*, That no producer, manufacturer, or dealer shall be prosecuted under this act for the shipment, delivery for shipment, or transportation of a product of any mine, quarry, mill, cannery, workshop, factory, or manufacturing establishment, if the only employment therein, within thirty days prior to the removal of such product therefrom, of a child under the age of sixteen years has been that of a child as to whom the producer or manufacturer has in good faith procured, at the time of employing such child, and has since in good faith relied upon and kept on file a certificate, issued in such form, under such conditions, and by such persons as may be prescribed by the board, showing the child to be of such an age that the shipment, delivery for shipment, or transportation was not prohibited by this act. Any person who knowingly makes a false statement or presents false evidence in or in relation to any such certificate or application therefor shall be amenable to prosecution and to the fine or imprisonment provided by this section for violations of this act. In any State designated by the board, an employment certificate or other similar paper as to the age of the child, issued under the laws of that State and not inconsistent with the provisions of this act, shall have the same force and effect as a certificate herein provided for.

Sec. 6. The word "person" as used in this act shall be construed to include any individual or corporation or the members of any partnership or other unincorporated association. The term "ship or deliver for shipment in interstate or foreign commerce" as used in this act means to transport or to ship or deliver for shipment from any State or Territory or the District of Columbia to or through any other State or Territory or the District of Columbia or to any foreign country; and in the case of a dealer means only to transport or to ship or deliver for shipment from the State, Territory, or district of manufacture or production.

Sec. 7. This act shall take effect from and after one year from the date of its passage.

Approved, September 1, 1916.

COMPENSATION LAW FOR INJURED EMPLOYEES OF THE UNITED STATES.

On September 7 the President affixed his signature to an act to provide compensation for employees of the United States suffering injuries while in the performance of their duties. This act supersedes the act of 1908, which made provision for certain groups of such employees, amounting in all to perhaps one-fourth of the more than 480,000 employees of the United States, as well as other acts applying to the Post Office Department and orders relating to the Isthmian Canal and the Panama Railroad and to the Alaskan Railway. The foregoing measures were restricted both in scope and remedial value, only one, the order relating to the Canal Zone, being at all of the type of compensation legislation in present general acceptance. Several amendments were made to the act of 1908, and efforts have been put forth during the greater part of its existence to secure a substitute for it which would be more inclusive as well as furnishing more adequate relief. No particular hostility to such measures was ever developed, but favorable action did not seem possible to be secured until at the recent session of Congress, when a bill prepared by the collaboration of the American Association for Labor Legislation and the United States Bureau of Labor Statistics was favorably acted upon.

The act provides for benefits on a basis of two-thirds of the injured employee's wages, payments continuing as long as the disability lasts. Partial disability is compensated on the basis of the wage loss resulting from the injury. Death benefits to a widow cease only on her death or remarriage and to children on their attaining the age of 18, though they may continue beyond this date if the child is incapacitated from earning a livelihood. Other beneficiaries are to be provided for in the absence of the foregoing or subject to their prior rights.

The maximum benefit payable under the law during total disability is $66.67 per month; the minimum, $33.33. No compensation is to be paid for the first three days of disability, but reasonable medical, surgical, and hospital services are to be furnished in all cases.

The act as drawn made provision for occupational or industrial diseases, but this provision was omitted in the enactment. Compensation is to be based on personal injury, however, and not on accident, and it was said on the floor of the House that laws of similar phraseology had been construed to include the results of occupational diseases. This question will, therefore, doubtless come up for consideration by the commission provided for by the act for its administration. This commission is to be appointed by the President for terms of six years, the initial appointments to be made for terms of two, four, and six years, respectively, in order to secure continuity by biennial expirations of terms of service.

The text of the act is given herewith:

PUBLIC—No. 267—64TH CONGRESS.

(H. R. 15316.)

SECTION 1. The United States shall pay compensation as hereinafter specified for the disability or death of an employee resulting from a personal injury sustained while in the performance of his duty, but no compensation shall be paid if the injury or death is caused by the willful misconduct of the employee or by the employee's intention to bring about the injury or death of himself or of another, or if intoxication of the injured employee is the proximate cause of the injury or death.

SEC. 2. During the first three days of disability the employee shall not be entitled to compensation except as provided in section nine. No compensation shall at any time be paid for such period.

SEC. 3. If the disability is total the United States shall pay to the disabled employee during such disability a monthly compensation equal to sixty-six and two-thirds per centum of his monthly pay, except as hereinafter provided.

SEC. 4. If the disability is partial the United States shall pay to the disabled employee during such disability a monthly compensation equal to sixty-six and two-thirds per centum of the difference between his monthly pay and his monthly wage-earning capacity after the beginning of such partial disability. The commission may, from time to time, require a partially disabled employee to make an affidavit as to the wages which he is then receiving. In such affidavit the employee shall include a statement of the value of housing, board, lodging, and other advantages which are received from the employer as a part of his remuneration and which can be estimated in money. If the employee, when required, fails to make such affidavit, he shall not be entitled to any compensation while such failure continues, and the period of such failure shall be deducted from the period during which compensation is payable to him.

SEC. 5. If a partially disabled employee refuses to seek suitable work or refuses or neglects to work after suitable work is offered to, procured by, or secured for him, he shall not be entitled to any compensation.

SEC. 6. The monthly compensation for total disability shall not be more than $66.67 nor less than $33.33, unless the employee's monthly pay is less than $33.33, in which case his monthly compensation shall be the full amount of his monthly pay. The monthly compensation for partial disability shall not be more than $66.67. In the case of persons who at the time of the injury were minors or employed in a learner's capacity and who were not physically or mentally defective, the commission shall, on any review after the time when the monthly wage-earning capacity of such persons would probably, but for the injury, have increased, award compensation based on such probable monthly wage-earning capacity. The commission may, on any review after the time when the monthly wage-earning capacity of the disabled employee would probably, irrespective of the injury, have decreased on account of old age, award compensation based on such probable monthly wage-earning capacity.

SEC. 7. As long as the employee is in receipt of compensation under this act, or, if he has been paid a lump sum in commutation of installment payments, until the expiration of the period during which such installment payments would have continued, he shall not receive from the United States any salary, pay, or remuneration whatsoever except in return for services actually performed, and except pensions for service in the Army or Navy of the United States.

SEC. 8. If at the time the disability begins the employee has annual or sick leave to his credit he may, subject to the approval of the head of the department, use such leave until it is exhausted, in which case his compensation shall begin on the fourth day of disability after the annual or sick leave has ceased.

SEC. 9. Immediately after an injury sustained by an employee while in the performance of his duty, whether or not disability has arisen, and for a reasonable time thereafter, the United States shall furnish to such employee reasonable medical, surgical, and hospital services and supplies unless he refuses to accept them. Such services and supplies shall be furnished by United States medical officers and hospitals, but where this is not practicable shall be furnished by private physicians and hospitals designated or approved by the commission and paid for from the employees' compensation fund. If necessary for the securing of proper medical, surgical, and hospital treatment, the employee, in the discretion of the commission, may be furnished transportation at the expense of the employees' compensation fund.

SEC. 10. If death results from the injury within six years the United States shall pay to the following persons for the following period a monthly compensation equal to the following percentages of the deceased employee's monthly pay, subject to the modification that no compensation shall be paid where the death takes place more than one year after the cessation of disability resulting from such injury, or, if there has been no disability preceding death, more than one year after the injury:

(A) To the widow, if there is no child, thirty-five per centum. This compensation shall be paid until her death or marriage.

(B) To the widower, if there is no child, thirty-five per centum if wholly dependent for support upon the deceased employee at the time of her death. This compensation shall be paid until his death or marriage.

(C) To the widow or widower, if there is a child, the compensation payable under clause (A) or clause (B) and in addition thereto ten per centum for each child, not to exceed a total of sixty-six and two-thirds per centum for such widow or widower and children. If a child has a guardian other than the surviving widow or widower, the compensation payable on account of such child shall be paid to such guardian. The compensation payable on account of any child shall cease when he dies, marries, or reaches the age of eighteen, or, if over eighteen, and incapable of self-support, becomes capable of self-support.

(D) To the children, if there is no widow or widower, twenty-five per centum for one child and ten per centum additional for each additional child, not to exceed a total of sixty-six and two-thirds per centum, divided among such children share and share alike. The compensation of each child shall be paid until he dies, marries, or reaches the age of eighteen, or, if over eighteen and incapable of self-support, becomes capable of self-support. The compensation of a child under legal age shall be paid to its guardian.

(E) To the parents, if one is wholly dependent for support upon the deceased employee at the time of his death and the other is not dependent to any extent, twenty-five per centum; if both are wholly dependent, twenty per centum to each; if one is or both are partly dependent, a proportionate amount in the discretion of the commission.

The above percentages shall be paid if there is no widow, widower, or child. If there is a widow, widower, or child, there shall be paid so much of the above percentages as, when added to the total percentages payable to the widow, widower, and children, will not exceed a total of sixty-six and two-thirds per centum.

(F) To the brothers, sisters, grandparents, and grandchildren, if one is wholly dependent upon the deceased employee for support at the time of his death, twenty per centum to such dependent; if more than one are wholly dependent, thirty per centum, divided among such dependents share and share alike; if there is no one of them wholly dependent, but one or more partly dependent, ten per centum divided among such dependents share and share alike.

The above percentages shall be paid if there is no widow, widower, child, or dependent parent. If there is a widow, widower, child, or dependent parent, there shall be paid so much of the above percentages as, when added to the total percentage payable to the widow, widower, children, and dependent parents, will not exceed a total of sixty-six and two-thirds per centum.

(G) The compensation of each beneficiary under clauses (E) and (F) shall be paid for a period of eight years from the time of the death, unless before that time he, if a parent or grandparent, dies, marries, or ceases to be dependent, or, if a brother, sister, or grandchild, dies, marries, or reaches the age of eighteen, or, if over eighteen and incapable of self-support, becomes capable of self-support. The compensation of a brother, sister, or grandchild under legal age shall be paid to his or her guardian.

(H) As used in this section, the term "child" includes step-children, adopted children, and posthumous children, but does not include married children. The terms "brother" and "sister" include stepbrothers and stepsisters, half brothers and half sisters, and brothers and sisters by adoption, but do not include married brothers or married sisters. All of the above terms and the term "grandchild" include only persons who at the time of the death of the deceased employee are under eighteen years of age or over that age and incapable of self-support. The term "parent" includes stepparents and parents by adoption. The term "widow" includes only the decedent's wife living with or dependent for support upon him at the time of his death. The term "widower" includes only the decedent's husband dependent for support upon her at the time of her death. The terms "adopted" and "adoption" as used in this clause include only legal adoption prior to the time of the injury.

(I) Upon the cessation of compensation under this section to or on account of any person, the compensation of the remaining persons entitled to compensation for the unexpired part of the period during which their compensation is payable shall be that which such persons would have received if they had been the only persons entitled to compensation at the time of the decedent's death.

(J) In case there are two or more classes of persons entitled to compensation under this section and the apportionment of such compensation, above provided, would result in injustice, the commission may, in its discretion, modify the apportionment to meet the requirements of the case.

(K) In computing compensation under this section, the monthly pay shall be considered not to be more than $100 nor less than $50, but the total monthly compensation shall not exceed the monthly pay computed as provided in section twelve.

(L) If any person entitled to compensation under this section, whose compensation by the terms of this section ceases upon his marriage, accepts any payments of compensation after his marriage he shall be punished by a fine of not more than $2,000 or by imprisonment for not more than one year, or by both such fine and imprisonment.

SEC. 11. If death results from the injury within six years the United States shall pay to the personal representative of the deceased employee burial expenses not to exceed $100, in the discretion of the commission. In the case of an employee whose home is within the United States, if his death occurs away from his home office or outside of the United States, and if so desired by his relatives, the body shall, in the discretion of the commission, be embalmed and transported in a hermetically sealed casket to the home of the employee. Such burial expenses shall not be paid and such transportation shall not be furnished where the death takes place more than one year after the cessation of disability resulting from such injury, or, if there has been no disability preceding death, more than one year after the injury.

SEC. 12. In computing the monthly pay the usual practice of the service in which the employee was employed shall be followed. Subsistence and the value of quarters furnished an employee shall be included as part of the pay, but overtime pay shall not be taken into account.

SEC. 13. In the determination of the employee's monthly wage-earning capacity after the beginning of partial disability, the value of housing, board, lodging, and other advantages which are received from his employer as a part of his remuneration and which can be estimated in money shall be taken into account.

SEC. 14. In cases of death or of permanent total or permanent partial disability, if the monthly payment to the beneficiary is less than $5 a month, or if the beneficiary is or is about to become a nonresident of the United States, or if the commission determines that it is for the best interests of the beneficiary, the liability of the United States for compensation to such beneficiary may be discharged by the payment of a lump sum equal to the present value of all future payments of compensation computed at four per centum true discount compounded annually. The probability of the beneficiary's death before the expiration of the period during which he is entitled to compensation shall be determined according to the American Experience Table of Mortality; but in case of compensation to the widow or widower of the deceased employee, such lump sum shall not exceed sixty months' compensation. The probability of the happening of any other contingency affecting the amount or duration of the compensation shall be disregarded.

SEC. 15. Every employee injured in the performance of his duty, or some one on his behalf, shall, within forty-eight hours after the injury, give written notice thereof to the immediate superior of the employee. Such notice shall be given by delivering it personally or by depositing it properly stamped and addressed in the mail.

SEC. 16. The notice shall state the name and address of the employee, the year, month, day, and hour when and the particular locality where the injury occurred, and the cause and nature of the injury, and shall be signed by and contain the adress of the person giving the notice.

SEC. 17. Unless notice is given within the time specified or unless the immediate superior has actual knowledge of the injury, no compensation shall be allowed, but for any reasonable cause shown, the commission may allow compensation if the notice is filed within one year after the injury.

SEC. 18. No compensation under this act shall be allowed to any person, except as provided in section thirty-eight, unless he or some one on his behalf shall, within the time specified in section twenty, make a written claim therefor. Such claim shall be made by delivering it at the office of the commission or to any commissioner or to any person whom the commission may by regulation designate, or by depositing it in the mail properly stamped and addressed to the commission or to any person whom the commission may by regulation designate.

SEC. 19. Every claim shall be made on forms to be furnished by the commission and shall contain all the information required by the commission. Each claim shall be sworn to by the person entitled to compensation or by the person acting on his behalf, and, except in case of death, shall be accompanied by a certificate of the employee's physician stating the nature of the injury and the nature and probable extent of the disability. For any reasonable cause shown the commission may waive the provisions of this section.

SEC. 20. All original claims for compensation for disability shall be made within sixty days after the injury. All original claims for compensation for death shall be made within one year after the death. For any reasonable cause shown the commission may allow original claims for compensation for disability to be made at any time within one year.

SEC. 21. After the injury the employee shall, as frequently and at such times and places as may be reasonably required, submit himself to examination by a medical officer of the United States or by a duly qualified physician designated or approved by the commission. The employee may have a duly qualified physician designated and paid by him present to participate in such examination. For all examinations after the first the employee shall, in the discretion of the commission, be paid his reasonable traveling and other expenses and loss of wages incurred in order to submit to such examination. If the employee refuses to submit himself for or in any way obstructs any examination, his right to claim compensation under this act shall be suspended until such refusal or obstruction ceases. No compensation shall be payable while such refusal or obstruction continues, and the period of such refusal or obstruction shall be deducted from the period for which compensation is payable to him.

SEC. 22. In case of any disagreement between the physician making an examination on the part of the United States and the employee's physician the commission shall appoint a third physician, duly qualified, who shall make an examination.

SEC. 23. Fees for examinations made on the part of the United States under sections twenty-one and twenty-two by physicians who are not already in the service of the United States shall be fixed by the commission. Such fees, and any sum payable to the employee under section twenty-one, shall be paid out of the appropriation for the work of the commission.

SEC. 24. Immediately after an injury to an employee resulting in his death or in his probable disability, his immediate superior shall make a report to the commission containing such information as the commission may require, and shall thereafter make such supplementary reports as the commission may require.

SEC. 25. Any assignment of a claim for compensation under this act shall be void and all compensation and claims therefor shall be exempt from all claims of creditors.

SEC. 26. If an injury or death for which compensation is payable under this act is caused under circumstances creating a legal liability upon some person other than the United States to pay damages therefor, the commission may require the beneficiary to assign to the United States any right of action he may have to enforce such liability of such other person or any right which he may have to share in any money or other property received in satisfaction of such liability of such other person, or the commission may require said beneficiary to prosecute said action in his own name.

If the beneficiary shall refuse to make such assignment or to prosecute said action in his own name when required by the commission, he shall not be entitled to any compensation under this act.

The cause of action when assigned to the United States may be prosecuted or compromised by the commission, and if the commission realizes upon such cause of action, it shall apply the money or other property so received in the following manner: After deducting the amount of any compensation already paid to the beneficiary and the expenses of such realization or collection, which sum shall be placed to the credit of the employees' compensation fund, the surplus, if any, shall be paid to the beneficiary and credited upon any future payments of compensation payable to him on account of the same injury.

SEC. 27. If an injury or death for which compensation is payable under this act is caused under circumstances creating a legal liability in some person other than the United States to pay damages therefor, and a beneficiary entitled to compensation from the United States for such injury or death receives, as a result of a suit brought by him or on his behalf, or as a result of a settlement made by him or on his behalf, any money or other property in satisfaction of the liability of such other person, such beneficiary shall, after deducting the costs of suit and a reasonable attorney's fee, apply the money or other property so received in the following manner:

(A) If his compensation has been paid in whole or in part, he shall refund to the United States the amount of compensation which has been paid by the United States and credit any surplus upon future payments of compensation payable to him on account of the same injury. Any amount so refunded to the United States shall be placed to the credit of the employees' compensation fund.

(B) If no compensation has been paid to him by the United States, he shall credit the money or other property so received upon any compensation payable to him by the United States on account of the same injury.

SEC. 28. A commission is hereby created, to be known as the United States Employees' Compensation Commission, and to be composed of three commissioners appointed by the President, by and with the advice and consent of the Senate, one of whom shall be designated by the President as chairman. No commissioner shall hold any other office or position under the United States. No more than two of said commissioners shall be members of the same political party. One of said commissioners shall be appointed for a term of two years, one for a term of four years, and one for a term of six years, and at the expiration of each of said terms, the commissioner then appointed shall be appointed for a period of six years. Each commissioner shall receive a salary of $4,000 a year. The principal office of said commission shall be in Washington, District of Columbia, but the said commission is authorized to perform its work at any place deemed necessary by said commission, subject to the restrictions and limitations of this act.

SEC. 28a. Upon the organization of said commission and notification to the heads of all executive departments that the commission is ready to take up the work devolved upon it by this act, all commissions and independent bureaus, by or in which payments for compensation are now provided, together with the adjustment and settlement of such claims, shall cease and determine, and such executive departments, commissions, and independent bureaus shall transfer all pending claims to said commission to be administered by it. The said commission may obtain, in all cases, in addition to the reports provided in section twenty-four, such information and such reports from employees of the departments as may be agreed upon by the commission and the heads of the respective departments. All clerks and employees now exclusively engaged in carrying on said work in the various executive departments, commissions, and independent bureaus, shall be transferred to, and become employees of, the commission at their present grades and salaries.

SEC. 29. The commission, or any commissioner by authority of the commission, shall have power to issue subpœnas for and compel the attendance of witnesses within a radius of one hundred miles, to require the production of books, papers, documents, and other evidence, to administer oaths, and to examine witnesses, upon any matter within the jurisdiction of the commission.

SEC. 30. The commission shall have such assistants, clerks, and other employees as may be from time to time provided by Congress. They shall be appointed from lists of eligibles to be supplied by the Civil Service Commission, and in accordance with the civil-service law.

SEC. 31. The commission shall submit annually to the Secretary of the Treasury estimates of the appropriations necessary for the work of the commission.

SEC. 32. The commission is authorized to make necessary rules and regulations for the enforcement of this act, and shall decide all questions arising under this act.

SEC. 33. The commission shall make to Congress at the beginning of each regular session a report of its work for the preceding fiscal year, including a detailed statement of appropriations and expenditures, a detailed statement showing receipts of and expenditures from the employees' compensation fund, and its recommendations for legislation.

SEC. 34. For the fiscal year ending June thirtieth, nineteen hundred and seventeen, there is hereby authorized to be appropriated, from any money in the Treasury not otherwise appropriated, the sum of $50,000 for the work of the commission, including salaries of the commissioners and of such assistants, clerks, and other employees as the commission may deem necessary, and for traveling expenses, expenses of medical examinations under section twenty-one and twenty-two, reasonable traveling and other expenses and loss of wages payable to employees under section twenty-one, rent and equipment of offices, purchase of books, stationery, and other supplies, printing and binding to be done at the Government Printing Office, and other necessary expenses.

SEC. 35. There is hereby authorized to be appropriated, from any money in the Treasury not otherwise appropriated, the sum of $500,000, to be set aside as a separate fund in the Treasury, to be known as the employees' compensation fund. To this fund there shall be added such sums as Congress may from time to time appropriate for the purpose. Such fund, including all additions that may be made to it, is hereby authorized to be permanently appropriated for the payment of the compensation provided by this act, including the medical, surgical, and hospital services and supplies provided by section nine, and the transportation and burial expenses provided by sections nine and eleven. The commission shall submit annually to the Secretary of the Treasury estimates of the appropriations necessary for the maintenance of the fund.

SEC. 36. The commission, upon consideration of the claim presented by the beneficiary, and the report furnished by the immediate superior and the completion of such investigation as it may deem necessary, shall determine and make a finding of facts thereon and make an award for or against payment of the compensation provided for in this act. Compensation when awarded shall be paid from the employees' compensation fund.

SEC. 37. If the original claim for compensation has been made within the time specified in section twenty, the commission may, at any time, on its own motion or on application, review the award, and, in accordance with the facts found on such review, may end, diminish, or increase the compensation previously awarded, or, if compensation has been refused or discontinued, award compensation.

SEC. 38. If any compensation is paid under a mistake of law or of fact, the commission shall immediately cancel any award under which such compensation has been paid and shall recover, as far as practicable, any amount which has been so paid. Any amount so recovered shall be placed to the credit of the employees' compensation fund.

SEC. 39. Whoever makes, in any affidavit required under section four or in any claim for compensation, any statement, knowing it to be false, shall be guilty of perjury and shall be punished by a fine of not more than $2,000, or by imprisonment for not more than one year, or by both such fine and imprisonment.

SEC. 40. Wherever used in this act—

The singular includes the plural and the masculine includes the feminine.

The term "employee" includes all civil employees of the United States and of the Panama Railroad Company.

The term "commission" shall be taken to refer to the United States Employees' Compensation Commission provided for in section twenty-eight.

The term "physician" includes surgeons.

The term "monthly pay" shall be taken to refer to the monthly pay at the time of the injury.

SEC. 41. All acts or parts of acts inconsistent with this act are hereby repealed: *Provided, however*, That for injuries occurring prior to the passage of this act compensation shall be paid under the law in force at the time of the passage of this act: *And provided further*, That if an injury or death for which compensation is payable under this act is caused under circumstances creating a legal liability in the Panama Railroad Company to pay damages therefor under the laws of any State, Territory, or possession of the United States or of the district of Columbia or of any foreign country, no compensation shall be payable until the person entitled to compensation releases to the Panama Railroad Company any right of action which he may have to enforce such liability of the Panama Railroad Company, or until he assigns to the United States any right which he may have to share in any money or other property received in satisfaction of such liability of the Panama Railroad Company.

SEC. 42. The President may, from time to time, transfer the administration of this act so far as employees of the Panama Canal and of the Panama Railroad Company are concerned to the governor of the Panama Canal, and so far as employees of the Alaskan Engineering Commission are concerned to the chairman of that commission, in which cases the words "commission" and "its" wherever they appear in this act shall, so far as necessary to give effect to such transfer, be read "governor of the Panama Canal" or "chairman of the Alaskan Engineering Commission," as the case may be, and "his"; and the expenses of medical examinations under sections twenty-one and twenty-two, and the reasonable traveling and other expenses and loss of wages payable to employees under section twenty-one, shall be paid out of appropriations for the Panama Canal or for the Alaskan Engineering Commission or out of funds of the Panama Railroad, as the case may be, instead of out of the appropriation for the work of the commission.

In the case of compensation to employees of the Panama Canal or of the Panama Railroad Company for temporary disability, either total or partial, the President may authorize the governor of the Panama Canal to waive, at his discretion, the making of the claim required by section eighteen. In the case of alien employees of the Panama Canal or of the Panama Railroad Company, or of any class or classes of them, the President may remove or modify the minimum limit established by section six on the monthly compensation for disability and the minimum limit established by clause (K) of secton ten on the monthly pay on which death compensation is to be computed. The President may authorize the governor of the Panama Canal and the chairman of the Alaskan Engineering Commission to pay the compensation provided by this act, including the medical, surgical, and hospital services and supplies provided by section nine and the transportation and burial expenses provided by sections nine and eleven, out of the appropriations for the Panama Canal and for the Alaskan Engineering Commission, such appropriations to be reimbursed for such payments by the transfer of funds from the employees' compensation fund.

Approved, September 7, 1916.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND INDUSTRIAL ACCIDENTS.

MICHIGAN.

Under the title "Michigan Workmen's Compensation Cases" the Industrial Accident Board of that State has published its first compilation of its own rulings and the decisions of the supreme court of the State on the Compensation Act of 1912. The volume also includes matter relating to administration, practice before the commission, rules of procedure, and forms and blanks for use in reporting accidents, etc.

Chief interest naturally attaches to the decisions of the supreme court which establish the constitutionality of the law generally (Mackin *v.* Detroit-Timken Axle Co., 153 N. W., 49, Bul. No. 189, p. 233); and its constitutionality in its application to municipal corporations (Wood *v.* City of Detroit, 155 N. W., 592; Purdy *v.* Sault Ste. Marie, 155 N. W., 597). Of high interest also is the case Adams *v.* Acme White Lead & Color Works (182 Mich., 157, 148 N. W., 485, Bul. No. 169, p. 258), in which the supreme court of the State held that the law did not permit compensation for occupational diseases, even though the body of the act did not contain the word accident. A board of arbitration had given an award in favor of the claimant in this case, which was affirmed by the Industrial Accident Board. On appeal to the supreme court, however, it was pointed out that the title restricted it to "personal injury by accident," and the award was reversed. That the board is inclined to a rather more liberal construction than the supreme court appeared also in the case Bischoff *v.* American Car & Foundry Co. (157 N. W., 34), the board in this case having awarded compensation for injuries received by a molder who undertook to point out to a machinist the place where repairs were needed, and while doing so lost a hand. The supreme court held that the work of repair was no part of a molder's employment, and that in going upon the machine he had gone without the scope of his duties and could recover nothing.

A large number of rulings are given on the points "arising out of employment," dependence, evidence, etc. In fact, the volume well meets the description given it by its own introduction as "an aid in the understanding and administration of the law," since "it substantially covers the development and administration of the compensation law up to the date of publication, July, 1916."

OHIO.

On November 1, 1915, 1,046 firms in Ohio employing a total of 222,697 persons were carrying self-insurance under the provisions of the workmen's compensation act, according to a recent report of the Department of Investigation and Statistics of the Ohio Industrial Commission.[1] In response to a request of the department for certain information relative to facilities provided for medical and hospital treatment of injured employees and also whether or not they had reinsured, 994 firms employing 221,061 persons sent in replies. Of the remaining firms, 9 are reported to have gone out of business since November 1. The returns received disclosed the fact that 284 firms employing a total of 173,762 persons had not reinsured, while 710 firms employing a total of 47,299 had reinsured. This would seem to indicate that while less than one-third (28.6 per cent) of the 994 firms were carrying insurance without reinsuring, these firms furnished employment to over three-fourths (78.6 per cent) of the 221,061 persons employed by all the firms reporting and to more than three-fourths (78 per cent) of the 222,697 employed by the total number of firms (1,046) carrying self-insurance under the State plan.

Since medical and hospital facilities may vary in the different establishments belonging to a firm, the information covering these facts is compiled for establishments. The 994 firms carrying self-insurance reported 1,017 establishments. Of these establishments, 59 reported hospitals connected with the plant (47 reported a complete hospital outfit), 34 reported an emergency dispensary only, 1 reported a physician at the plant but no hospital, while 923 reported no hospital facilities. Of the 59 establishments, 28 reported more than 1,000 employees, while of the 923 establishments the great majority (79.6 per cent) reported less than 100 employees each. Of the 1,017 establishments, only 188 (18.5 per cent) reported having contracts with outside physicians, while 619 (60.9 per cent) reported having no such contract. Fifty-three reported that they had no contract, but that they did call in the nearest physician, while 157 made no report on this point. One hundred and forty-six reported that they had arrangements with outside hospitals; in 754 establishments (74.1 per cent) the choice of physician is allowed, with or without certain restrictions, by the person injured or his family or friends, and of this number 604 establishments (80.1 per cent) pay the physician. The returns indicated that first-aid outfits were in use in 354 (42.4 per cent) of the establishments giving information on this point.

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[1] Ohio. Industrial Commission. Department of Investigation and Statistics, Report No. 22, April, 1916. Report on employers carrying self-insurance as provided under sec. 22 of the workmen's compensation act. Columbus, 1916. 7 pp.

REPORT OF COMMITTEE ON STATISTICS AND COMPENSATION INSURANCE COST OF THE INTERNATIONAL ASSOCIATION OF INDUSTRIAL ACCIDENT BOARDS AND COMMISSIONS.

The International Association of Industrial Accident Boards and Commissions was organized "to bring into closer relation with one another the various boards and commissions administering compensation laws of the United States, and to effect so far as possible uniformity of legislation and administration of such laws and to encourage and give effect to all measures looking toward the prevention of accidents and the safeguarding of plants and machinery." At the meeting held in Chicago on January 12 and 13, 1915, the committee on statistics and compensation insurance cost was created and commissioned to prepare: (1) Uniform tables for the establishment of compensation costs; (2) uniform classification of industries; (3) uniform classification of causes of injuries; (4) uniform classification of nature of injuries. The first report of the committee,[1] embracing a preliminary grouping of industries, was approved by the association at its meeting held at Seattle, September 30 to October 2, 1915, and a second report, which was submitted at the third annual meeting of the association held at Columbus, April 25 to 28, 1916, has just been published as Bulletin 201 of the United States Bureau of Labor Statistics.[2] This report is signed by the members of the committee, who were as follows:

E. H. Downey, chairman, special deputy, Pennsylvania insurance department, Harrisburg, Pa.

Royal Meeker, Commissioner of Labor Statistics, Washington, D. C.

Robert K. Orr, manager State accident fund, Lansing, Mich.

W. N. Magoun, general manager Pennsylvania compensation rating and inspection bureau, Philadelphia, Pa.

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[1] The first report of the committee was printed in full in the November, 1915, issue of the MONTHLY REVIEW, pp. 28–37.

[2] Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. United States Bureau of Labor Statistics, Bulletin 201. Washington, 1916. 128 pp.

H. E. Ryan, associate actuary, State insurance department, New York City.

Floyd L. Daggett, chairman, industrial insurance commission, Olympia, Wash.

Fred C. Croxton, chief statistician, industrial commission, Columbus, Ohio.

L. W. Hatch, chief statistician, industrial commission, Albany, N. Y.

E. E. Watson, actuary, industrial commission, Columbus, Ohio.

In its work the committee had the benefit of the cooperation of the Casualty Actuarial and Statistical Society of America and the Workmen's Compensation Service Bureau. This latter organization has done much to bring about uniform classification of industries, and the original classification issued by it was taken as the basis by the committee in working out a classification of industrial processes.

The work of the committee was guided by the accepted principle that statistics of industrial accidents should serve for accident prevention, for the due administration and intelligent revision of workmen's compensation laws, and for the computation of compensation insurance rates. To this end the committee recommends that accident statistics be analyzed by industries, by cause of accident, and by nature and location of injury, and the extent of disability, and cross analyzed so as to show the correlation of each of these sets of facts with each other.

After the approval of the first report of the committee on statistics and compensation insurance cost by the association in its annual meeting at Seattle, in 1915, there remained for the committee the preparation of the final subdivisions of classifications under each of the various industry groups, the preparation of classifications of causes of accidents and of nature of injuries and the drafting of uniform tables for the presentation of accident and compensation statistics. All of these subjects, except the drafting of uniform tables, in which the committee is now engaged, are covered in the report under review.

It is believed that these classifications, necessarily the result of compromise, will serve the most important needs of industrial accident statistics. They are the fruit of much thought and discussion by experienced statisticians. They have made use of whatever was best and applicable to American conditions in the official classifications of the United States and Europe. All are designed to admit of contraction or expansion according to the varied needs and facilities of the different administrative boards.

The industry classifications are presented under seven principal divisions or primary headings, including (A) Agriculture, (B) Mining and quarrying, (C) Manufacturing, (D) Construction, (E) Transportation and public utilities, (F) Trade, (G) Service. The 7 divisions are divided into 43 schedules, these secondary headings explaining the details into which the primary headings are separated. For example, the primary heading "Manufacturing" is divided into 18 schedules, such as lumber and wood, leather, textiles, chemicals, paper, etc. The group headings, of which there are 272, are the most important in the series, and show a refinement of the secondary headings. Each group heading is intended to be significant of the industries covered under it. The final subdivision consists of the classifications of industries appearing in the manuals used by insurance companies in connection with their writing of workmen's compensation insurance. These final subdivisions are of special value to industrial accident boards and commissions, serving as an index to show what industries are intended to be covered by the respective groups. Opposite each industrial process is printed the Workmen's Compensation Manual code number given to that process in the manual, in order to facilitate the work of translation and comparison of accident statistics recorded under the classification of the Committee on Statistics and Compensation Insurance Cost with those of the Workmen's Compensation Service Bureau, since it was impossible for the latter to make this classification conform exactly with the classification adopted by the committee.

The whole purpose of a classification of accidents by causes is accident prevention. The committee recommends that for the sake of uniformity accidents be assigned to the proximate cause, namely, "to that condition or circumstance the absence of which would have prevented the accident; but if there be more than one such condition or circumstance, then to the one most easily prevented."

The causes of accidents have been grouped into 12 divisions, as follows: I. Machinery; II. Boilers and steam-pressure apparatus; III. Vehicles; IV. Explosives, electricity, fires, and hot and corrosive substances; V. Poisonous substances; VI. Falls of persons; VII. Stepping on or striking against objects; VIII. Falling objects; IX. Objects being handled; X. Hand tools; XI. Animals; XII. Miscellaneous causes. These, again, have been subdivided into general classes. Machinery, for instance, is divided into prime movers, power-transmission apparatus, power-working machinery, hoisting apparatus and conveyors, and miscellaneous machinery. A detailed analysis of machine accidents by manner of occurrence and by part of machine on which the accident occurred is recommended. Inasmuch as experience has shown that both in the United States and abroad machinery of all descriptions accounts for not more than one-fourth of the industrial accidents, the committee gives considerable attention to nonmachine accidents.

The committee has recommended four classifications of accidental injuries, as distinguished from the accidents themselves, namely, the location of injury or part of body injured, the nature of injury, the extent of disability, and, as a subdivision of the last, the degree of partial disability. In assignment of the location of injury, the committee has followed the common anatomical divisions, beginning with the head and ending with the feet. Special provision has been made for injuries involving two or more parts. The nature of injury classification is confined to the injuries sustained at the time of the accident, and is designated by popular rather than technical medical terms. Special provision is recommended for infections, so that the infection shall be correlated with the nature of injury and also with the extent of disability. With respect to extent of disability, injuries are divided into the generally recognized classes of fatalities, permanent total disabilities, permanent partial disabilities, temporary total disabilities, and temporary partial disabilities. Permanent disabilities are further divided into dismemberment and others.

The report includes appendixes briefly setting forth the resolutions in regard to accident and workmen's compensation adopted by the National Association of Industrial Accident Boards and Commissions at Chicago, January 12 and 13, 1915; resolutions adopted at the joint conference on standardization of accident reports and tabulations, held at Chicago, October 12 and 13, 1914; and definitions of injuries and methods of tabulating the various kinds of injuries and compensation payments in use by the Workmen's Compensation Service Bureau.

The report includes a comprehensive and exhaustive index with cross references to facilitate the work of finding a desired classification.

PREVENTION OF INDUSTRIAL ACCIDENTS.

The safety movement is in a state of constant evolution. As new machinery is devised and new methods are adopted to meet the demands of an era of unparalleled industrial progress accident hazards are multiplied and the necessity for protecting the men who toil presents a problem of considerable magnitude which must be met adequately and conclusively if industry is to be freed of the large proportion of the preventable accidents which have heretofore been charged against it. To this end the safety-first movement has in recent years been developed along practical lines; studies have been made by industrial engineers, safety inspectors, and others familiar with the problems to be met; safety rules and regulations covering processes and occupations in various types of establishments have been formulated, machinery has been guarded, and attention has been given to proper sanitation, lighting, heating, ventilation, welfare work, hospital and first-aid equipment, and to other factors vitally necessary to an efficient working force.

In furtherance of this safety first or accident prevention campaign, two books have been recently issued, one entitled "Practical Safety Methods and Devices"[1] and the other "Industrial Accident Prevention,"[2] each of which seeks to present an authorative statement of accident prevention methods proved by actual experience to be effective and practical. Although not particularly the aim of the author, the first book perhaps more than the second appeals to the layman who is interested in the study of safety methods and their adaptation to specific industries. There are many illustrations. The other book is particularly useful to the employer, engineer, superintendent, and foreman who is not only looking for practical workable methods but who seeks definite and detailed suggestions for putting them into actual use. It is illustrated with over 650 photographs and diagrams.

Accident prevention, it is stated, is now receiving considerable attention in this country and it has been demonstrated by employers, safety engineers, and accident indemnity companies that it is practicable, profitable, and humane to prevent a very large proportion of such accidents. The volume on "Practical Safety Methods and Devices" has been prepared to provide employers, superintendents, foremen, underwriters, safety inspectors, and engineers generally a convenient descriptive and illustrative summary of standard safety methods and devices as developed and perfected by those who have specialized in the subject of accident prevention. It is the result of observation made in hundreds of mills and manufacturing establishments, in building and construction work, railroad operation, handling explosives, and mining. It is not an exhaustive study, but aims to present general principles in such a manner as to be useful in special and exceptional applications not specifically described.

The author points out that safety engineering has become a well established profession; that safety is essential to efficiency; that education is the keynote to universal safety, emphasizing the fact that the public school is the logical starting point for this educational campaign; that 90 per cent of all work accidents are actually preventable, 30 per cent by means of safeguards and 60 per cent by the proper education of employees in matters pertaining to safety; and suggests that if these methods are used to check the waste indicated in the paragraph quoted from the preface, "employers of labor may expect to ultimately save the entire cost of insurance on these preventable accidents. Employees may also expect to save at least 75 per cent of the losses in wage now incurred by these casualties."

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[1] Practical Safety Methods and Devices; Manufacturing and Engineering, by George Alvin Cowee. New York, Van Nostrand Co., 1916. 464 pp. Illustrated. $3, net.

[2] Industrial Accident Prevention, by David Stewart Beyer. New York and Boston, Houghton Mifflin Co., 1916. 421 pp. Illustrated. $10, net.

The author cites the following illustration to emphasize his point that accident prevention is a paying investment.

> The most striking proof of this statement is revealed in the experience of the United States Steel Corporation. Approximately $5,000,000 was expended during the last eight years by the subsidiary companies of the corporation for the installation of safety devices and the adoption of accident-prevention measures. In three years the safety work resulted in the prevention of 6,308 accidents which would have otherwise occurred if the accident ratio of preceding years had been maintained. In other words, the accident rate has been reduced approximately 40 per cent during the past five years. Likewise, the saving in casualty expense over expenditures for safety, during the past three years, has been over 35 per cent. When we consider, in connection with this exhibit, that the compensation to injured workmen during this period was materially increased, the emphatic conclusion is that safety pays.

In the campaign for safety it is believed that the education of employees should receive the first consideration, and this may be effected through the organization, in each plant, of a safety committee made up of workmen, such committee to investigate all accidents and consider methods of prevention, warn fellow workmen against unsafe practices, and to report all suggestions and recommendations to the safety department. The organization of a central safety committee to have general charge and supervision of all safety work, including the carrying on of an educational campaign among the employees, is also recommended. These safety committees are regarded as of great service not only in the prevention of accidents but also in the increase of efficiency of the workers and in the promotion of universal good will. In mentioning some general observations looking to the promotion of safety the author suggests that the safeguarding of machinery and work places is one of the best investments that an employer can make, for it is to his interest, as well as to the interest of his employees, to maintain safe conditions in his factory; that danger signs should be displayed wherever necessary; that workmen should be cautioned to wear proper clothing; that congested work places should be eliminated; that intoxicants should be avoided; that workmen should not be allowed to become fatigued at their work; that concentration of mind and eye should be taught; that discipline should be maintained; that periodical insoections should be made; that children should be taught in the art of self-preservation from public and industrial dangers; that the public generally should be impressed with the importance of the safety problem.

Following chapters on buildings and fire hazard, exit fire drills, and the organization of fire brigades, the author enters into a detailed description of the use and operation of various kinds of tools and machines, and of occupations involving danger to workmen, including in each chapter suggestions and rules to be observed to promote safety. These chapters cover: Boilers, engines, elevators, electricity, transmission, machine tools, grinding machinery, woodworking machinery, common machines, iron and steel, handling and storing material, construction work, steam and electric railroads, mining and quarrying, and explosives. There is a chapter embracing 21 rules for foremen and 60 general rules to be observed in the prevention of accidents. Suggestions as to sanitation, illumination, heating, ventilation, and welfare work are given, as well as precautions to be taken against occupational diseases, and the necessity of organizing adequate first-aid work, together with an outline of the symptoms and treatment of different injuries, including eye injuries, electric shock, infection, hemorrhage, shock, contusions or bruises, wounds, fractures, dislocations, sprains, strains, hernia or rupture, burns or scalds, poisoning, fainting, epileptic fits, apoplectic fits, and sunstroke.

The author of "Industrial Accident Prevention" confines himself almost exclusively to a presentation of this subject, but describes in a general way such related subjects as sanitation, relief, and welfare work, and hospital and first-aid equipment. The first part is devoted to a discussion of general phases of the accident problem, including a chapter on compensation legislation, accident waste versus accident prevention, causes of accidents, engineering provisions, and plant arrangement. Parts II to VII, inclusive, deal, respectively, with building construction and arrangement; power generation and distribution; machine construction and arrangement; special industries; fire hazard; and explosion hazard. Part VIII takes up personal elements to be considered in accident prevention and presents chapters on safety education; inspection; eye protection; housekeeping, hand labor, etc.; hospital and first-aid equipment; resuscitation; occupational diseases; sanitation and welfare work.

Following a chapter outlining briefly the history and scope of various compensation laws affecting industrial accidents, in which it is pointed out that compensation legislation has stimulated accident prevention, the author presents figures showing that it is more profitable for employers to introduce preventive measures than it is to compensate injured workmen and otherwise meet the enormous expense involved in accident waste. Among others, the experience of the Eastman Kodak Co. is given, which in 1914 reduced the number of accidents 75 per cent from the total in 1910.

In presenting a list of 90,168 injuries which occurred in Massachusetts during one year, the author makes the point that approximately one-third were mechanical—that is, they occurred on machines, shafting, gearing, etc.—and the other two-thirds were nonmechanical. However, he concludes from this and other data that from the standpoint of seriousness industrial accidents are divided about equally between mechanical and nonmechanical. This conclusion—

> indicates that after all possible mechanical safeguards have been installed there will still remain a large percentage of accidents which can not be prevented by mechanical means. There is an effective way to reach such accidents, however, which is equally important with the installation of mechanical safeguards; that is the education of the workmen in the exercise of greater care for the avoidance of injuries to themselves and their fellow-workmen. * * * To summarize, * * * 50 per cent of our present industrial accidents are preventable—25 per cent by mechanical safeguards and 25 per cent by education.

Emphasis is placed upon the responsibility of the modern industrial engineer for efficiency in construction and operation and the elimination of needless expense and waste, necessitating familiarity with improved safety practice and ability to apply it to his current work.

The author deplores the fact that "a large percentage of the buildings which have been erected in the past, and many of those which are now being erected even by architects of good reputation, are decidedly lacking in one or both" of the following two considerations which are regarded as of paramount importance in combating the fire hazard:

> 1. The design of the building and the materials used in its construction should, so far as practicable, prevent the rapid spread of fire.
> 2. Sufficient exit facilities of a safe and dependable type should be provided to enable all the occupants of a building to leave it quickly in case of fire.

Suggestions are given as to designs, materials, and exit facilities.

In some detail the author discusses the causes of the collapse or failure of building structures, and the necessity for good lighting and adequate ventilation, which, it is pointed out, tends to reduce the alertness of the workmen and bring on fatigue which in turn causes serious accidents.

Accident prevention in relation to specific industries, occupations, and equipment is taken up in a series of chapters presenting an exhaustive fund of suggestions looking to the minimizing or elimination of the hazards to which workmen are constantly exposed. These chapters include boiler equipment, engine equipment; electricity; power control—quick-stopping devices, etc.; protection of power transmission equipment; cast iron and steel; machine design and guards for machine hazards; cranes; elevators; punch presses; machine shop and blacksmith shop equipment; carpenter shop and woodworking equipment; abrasive wheels; ladders and scaffolding; ropes, slings, chains, hooks, etc.; iron and steel works; foundries; wire-mill equipment; railroad equipment; chemical works, laboratories, etc.; textile equipment; leather and shoe industries; gas works; contracting; laundries; refrigerating plants; paper industry, printing, etc.; candy factories; mining. Two chapters are devoted to fire hazard—fire prevention and fire extinguishing, and fire drills and fire alarm systems, and four chapters present suggestions as to explosion hazard, namely, explosives, explosive dusts, celluloid and celluloid goods manufacture, and volatile and inflammable liquids.

The author believes that the formation of safety committees among the workmen is one of the most effective methods of safety education because they result "in the development throughout the working organization of a body of wide-awake men who are genuinely interested in looking out for their own safety as well as that of their fellow workmen." Other effective methods are accident pictures, safety bulletins, safety talks, and safety signs and slogans. The organization of an inspection service within the plant is considered of great value since it is effective not only from the standpoint of eliminating accident hazards, but also from that of educating the personnel of the working forces along accident prevention lines. The large number of accidents affecting the eyes prompted the author to devote a chapter to the subject of eye protection. Directions for first-aid treatment, covering the different kinds of injuries to which workmen are susceptible, are given in a chapter on hospital and first-aid equipment. Methods of resuscitation are set forth.

A list of common occupational diseases is presented showing that in the British factories for the years 1911 to 1913, out of a total of 2,036 cases, 1,791 were due to lead poisoning, and in this connection the author devotes the major portion of his chapter on occupational diseases to a consideration of this particular disease, giving the symptoms, preventive measures and a set of rules and other information prepared by the Massachusetts General Hospital to be posted under the following caption: Advice to persons working with lead or with lead paints.

The volume concludes with a short chapter on sanitation and welfare work, and one giving a list of safety organizations, publications, etc.

TRINITROTOLUOL MANUFACTURING: PRECAUTIONARY MEASURES.[1]

TNT is the abbreviation for trinitrotoluol,[2] a highly poisonous substance used in the manufacture of explosives. In its manufacture illness is due principally to escape of (1) nitrous fumes evolved mainly in the manufacture of nitric acid and during the dilution of the TNT waste acids, and (2) chlorine and compounds of chlorine given off at the commencement of working each charge when not thoroughly absorbed in the towers. The pamphlet under review suggests precautionary measures against poisoning and gives instructions as to accidents, minor injuries, use of air helmets, use of oxygen cylinder, artificial breathing, the treatment of cases of gasing by nitrous fumes,[3] instruction for first-aid attendants, and 11 rules suggesting how to avoid the effects of TNT poisoning.

Illness as a result of this poison, it is stated, may result from (1) general effects on the constituents of the blood, and (2) local effects—dermatitis or eczema. Absorption of poison takes place by inhalation of vapor or dust, by contact with the skin and by the alimentary canal. Effective ventilation largely overcomes the first; through proper provision and maintenance of clothing, washing facilities and meal room accommodation the second may be controlled. The eating of potatoes, green vegetables and uncooked fruits and the drinking of orange or lemen juice are recommended as effective in minimizing the last named method of absorption.

Symptoms, it is declared, may develop quickly, especially where there has been exposure in a confined space, in which case the best treatment seems to be inhalation of oxygen, a cylinder of which should be kept in readiness. In some workers an irritating rash on the arms is caused by trinitrotoluol, but evidence has accumulated to show that if washing facilities are suitable and are regularly used by the workers, the hands being thoroughly dried afterwards, occurrence of eczema is rare.

Emphasis is laid upon the importance of reporting all injuries, however trivial, to the foreman, and that the workmen should also report (1) a persistent cough due to no known cause, (2) unaccustomed shortness of breath, (3) fatigue not explained by exertion, and (4) pains coming on suddenly in the feet and legs.

> Such symptoms should not be disregarded because they are trivial. In fact, they are only trivial if attended to in time. They may indicate the slight beginnings of poisoning, the effects of which rapidly become serious if the poisonous influences are not counteracted.

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[1] Great Britain. Home Office. Factory Department. Trinitrotoluol Manufacturing. Precautionary measures. [London] March, 1916. 22 pp. Illustrated.

[2] A brief statement of symptoms of trinitrotoluol poisoning and preventive measures to be adopted appeared in the MONTHLY REVIEW for June, 1916, p. 84.

[3] This subject was covered briefly in the MONTHLY REVIEW for June, 1916, p. 87.

In the case of minor injuries causing abrasion of the skin, however slight, the worker is not to touch, wash, or attempt to dress the wound; he or she is to go to the nearest place where first-aid dressings are kept and have the wound attended to by the person in charge of the first-aid dressing box.

Remedies for acid burns must be applied very promptly. The utmost care is to be used in dealing with acid burns to the eyes. When any acid gets into the eyes they are to be attended to at once by the person in charge of the first-aid dressing box.

The danger from nitrous fumes is recognized, and the pamphlet contains certain specific instructions in this connection.

1. Workmen are warned against breathing brown acid fumes.
2. Always put on the air helmet before repairing leaks or entering or remaining in a part of the room heavily charged with the fumes.
3. The fumes, if breathed, may cause shortness of breath some hours later and lead to serious illness.
4. If these symptoms develop at home, send at once for a doctor and meanwhile keep in the open air as much as possible.
5. If they develop at the works, send at once for the doctor.
6. Keep the air helmet handy and in good repair, as you never know when you may want it.

There is an appendix setting forth the Home Office regulations applying in factories where trinitrotoluol is manufactured.

FIFTH ANNUAL SAFETY CONGRESS OF THE NATIONAL SAFETY COUNCIL.

The fifth annual safety congress of the National Safety Council will be held in the Statler Hotel, Detroit, October 17 to 20, inclusive. The program will be presented in sectional meetings, with addresses and general discussion, relating to the chemical industry, foundries, iron and steel, mining, public utilities, steam railroads, health service, electric railways, paper and pulp, textiles, cement, employees' benefit associations, governmental; logging, lumbering and woodworking; and public safety. The program includes the following principal addresses:

CHEMICAL SECTIONAL MEETING (OCT. 18, MORNING).

Health problems in the chemical industry, by Dr. George M. Price, Joint Board of Sanitary Control, New York City.

The goggle problem in the chemical industry, by J. R. de la Torre Bueno, General Chemical Co., New York City.

Care of workmen employed in the manufacture of aniline and benzol products, by A. B. Mitchell, Benzol Products Co., Marcus Hook, Pa.

Fume poisoning from nitric and mixed acids, by L. A. De Blois, E. I. du Pont de Nemours & Co., Wilmington, Del.

FOUNDRY SECTIONAL MEETING (OCT. 18, MORNING).

Employment problem as related to safety.

Strains, sprains, and burns, by S. W. Ashe, General Electric Co., Pittsfield, Mass.

Crane and chain practices, by F. H. Elam, American Steel Foundries, Chicago, Ill.

Eye protection, by F. W. Shepard, American Cast Iron Pipe Co., Birmingham, Ala.

Alcohol versus safety, by Dr. H. P. Hourigan, surgeon, Larkin Co., Buffalo, N. Y.

Foundry sanitation, by J. F. Alexander, The Metal Trades Safety Association, Toronto, Canada.

IRON AND STEEL SECTIONAL MEETING.

(Oct. 18, morning.)

Progress of safety in iron and steel industry (illustrated with lantern slides), by Lucian W. Chaney, United States Department of Labor.

Safety in blast furnace operation, by F. H. Wilcox, United States Bureau of Mines.

Safety in Bessemer operations, by J. H. Ayres, National Tube Co., National Works, McKeesport, Pa.

Safety in open hearth operations.

(Oct. 19, morning.)

Achievements and possibilities of accident prevention in American industries, by F. L. Hoffman, LL. D., Prudential Life Insurance Co., Newark, N. J.

Employment, by A. H. Young, Illinois Steel Co., South Chicago, Ill.

Origin of safety methods and prevention of infection, by Dr. C. C. Booth, chief surgeon, Republic Iron & Steel Co., Youngstown, Ohio.

The duties of the visiting nurse, by Miss Florence Wright, Clark Thread Co., Newark, N. J.

(Oct. 20, morning.)

Safety in rolling mill operations, by Charles R. Hook, American Rolling Mill Co., Middletown, Ohio.

Electric hazards, by D. M. Petty, Bethlehem Steel Co., South Bethlehem, Pa.

Safety in coke oven operations, by K. M. Burr, Illinois Steel Co., Gary, Ind.

Police and fire, by G. W. Atwood, Youngstown Sheet & Tube Co., Youngstown, Ohio.

MINING SECTIONAL MEETING.

(Oct. 18, morning.)

Accident statistics, by Albert H. Fay, United States Bureau of Mines.

Mine safety signs and signals, by D. J. Parker and Edwin Steidle, United States Bureau of Mines.

Qualifications of a mine foreman, by J. W. Paul, consulting engineer, Pittsburgh, Pa.

Workmen's compensation and its effect on safety in mining, by H. M. Wilson, the Associated Companies, Pittsburgh, Pa.

Mine accidents and their prevention, by H. G. Davis, Delaware, Lackawanna & Western Railroad, Kingston, Pa.

Relation of workmen's compensation laws to accident prevention movement, by Dr. F. D. Patterson, Pennsylvania Department of Labor and Industry, Harrisburg, Pa.

Underground sanitation at the mines, by W. A. Borchard, Austinville, Va.

(Oct. 19, morning.)

Safety in hoisting and slope haulage, by O. P. Hood, United States Bureau of Mines.

Mine inspection, by William H. Jobe, mine inspector, Crystal Falls, Mich.

Welfare work, by E. E. Bach, Ellsworth Collieries Co., Ellsworth, Pa.

Mine fires and their recovery, by Prof. J. C. Roberts, Colorado School of Mines, Golden, Colo.

Mine rescue apparatus—its value as a safety measure, by Oscar Cartledge, Ottawa, Ill.

Metal mine accidents and their prevention, by Prof. F. W. Sperr, School of Mines, Houghton, Mich.

Education of miners in safety, by C. S. Stevenson, Cleveland Cliffs Iron Co., Ishpeming, Mich.

PUBLIC UTILITIES SECTIONAL MEETING.

(Oct. 18, morning.)

Station safeguarding, by Charles Penrose, Philadelphia Electric Co., Philadelphia, Pa.

Accident prevention in the commercial department of a large gas company, by C. W. Clabaugh, Omaha Gas Co., Omaha, Nebr.

Safety from the economic standpoint, by B. Frank Day, Philadelphia Electric Co.. Philadelphia, Pa.

Safety wrinkles around gas works, by G. I. Vincent, Des Moines Gas Co., Des Moines, Iowa.

STEAM RAILROAD SECTIONAL MEETING.

(Oct. 18, morning.)

The prevention of accidents, by R. C. Richards, Chicago & North Western Railway, Chicago, Ill.

The American railroad passenger: (1) What the railroads have done and are doing for his safety; (2) What he should do for his own safety, by G. L. Wright, Chicago, St. Paul, Minneapolis & Omaha Railroad, St. Paul, Minn.

Railroad trespassing—Its prevention a public duty, by A. A. Krause, Missouri, Kansas & Texas Railway, St. Louis, Mo.

(Oct. 18, afternoon.)

Railway crossing accidents: (1) Their cause; (2) How they can be reduced, by John S. Rockwell, Buffalo, Rochester & Pittsburgh Railway, Rochester, N. Y.

How should the members of safety committees be selected and for what length of time should they serve? by E. R. Scoville, Baltimore & Ohio Railroad, Baltimore, Md.

In order to secure the best results in safety work what should be the relation of the railroad company and its officers to the safety first organization? by J. M. Guild, Union Pacific Railroad, Omaha, Nebr.

(Oct. 19, morning.)

The most frequent causes of injury to track and bridgemen and the best way to eliminate these causes, by Charles T. Banks, Erie Railroad Co., New York City.

Shop accidents: (1) What has been accomplished in their reduction; (2) How was it done and what more can be accomplished? by B. C. Winston, Wabash Railway Co., St. Louis, Mo.

How shall injuries resulting from train operation other than collisions and derailments be prevented? by F. M. Metcalfe, Northern Pacific Railway Co., St. Paul, Minn.

(Oct. 19, afternoon.)

How to make safety committee meetings interesting, by W. C. Wilson, Delaware, Lackawanna & Western Railway Co., New York City.

The national safety council: (1) What service does it render its members and how can that service be improved? (2) What it is doing for the public, by G. S. Locker, Duluth & Iron Range Railroad, Two Harbors, Minn.

HEALTH SERVICE SECTIONAL MEETING.

(Oct. 18, afternoon.)

Health service work as an efficiency factor, by Dr. Otto P. Geier.

Health education, by Dr. L. G. Shoudy, chief surgeon, Bethlehem Steel Co., South Bethlehem, Pa.

Physical examination of employees, by Dr. Wilbur E. Post, chief medical adviser, Peoples Gas, Light & Coke Co., Chicago, Ill.

First aid, by Dr. J. C. Bloodgood, Johns Hopkins University, Baltimore, Md.

Occupational diseases, by Dr. E. R. Hayhurst, Ohio State Board of Health, Columbus, Ohio.

Health insurance, by A. W. Whitney, National Workmen's Compensation Service Bureau, New York City.

(Oct. 19, afternoon.)

The company doctor, by Dean Samuel S. Marquis, Ford Motor Co., Detroit, Mich.

Employment, medical supervision, and safety, by L. A. Phelps, The Avery Co., Peoria, Ill.

Industrial hospital and dispensaries, by Dr. R. C. Cabot, Boston, Mass.

Hernia, by Dr. James Burry, chief surgeon, Illinois Steel Co., Chicago, Ill.

Dental work in the industries, by Dr. Lee K. Frankel, Metropolitan Life Insurance Co., New York City.

(Oct. 20, afternoon.)

Relationship of health to industry, by Dr. W. A. Evans, Chicago Tribune, Chicago, Ill.

Medical supervision of workmen, by Dr. Harry E. Mock, chief surgeon, Sears, Roebuck & Co., Chicago, Ill.

Reduction of health hazards, by Dr. Francis D. Patterson, Pennsylvania Department of Labor and Industry, Harrisburg, Pa.

Standards of industrial hygiene, by Dr. J. W. Schereschewsky, United States Public Health Service.

ELECTRIC RAILWAY SECTIONAL MEETING.

(Oct. 19, morning.)

How the attitude of the public toward the railroad company is influenced by systematic safety work, by Russel A. Sears, Boston Elevated Railway Co., Boston, Mass.

How graphic charts and bulletins help in safety education, by Harold W. Clapp, Columbus Railway, Power & Light Co., Columbus, Ohio.

Safety and efficiency—How a new member tackles the problem, by Julien H. Harvey, Kansas City Railway Co., Kansas City, Mo.

How the safety movement is helping the electric railway industry meet its problems, by Prof. H. H. Norris, Electric Railway Journal, New York City.

(Oct. 19, afternoon.)

The application of the national electric safety code to electric railway construction and operation, by W. J. Canada, United States Bureau of Standards.

Safety devices on electric street and interurban cars, by Charles H. Cross, Milwaukee Electric Railway & Light Co., Milwaukee, Wis.

Warnings at interurban and obstructed crossings.

Hazards of power houses and car barns and their remedies.

Methods of instructing new motormen in their duties, by H. B. Adams, Aurora, Elgin & Chicago Railway, Aurora, Ill.

PAPER AND PULP MANUFACTURERS' SECTIONAL MEETING.

(Oct. 19, morning.)

Paper mill lighting.

Guarding of electrical and steam machinery in paper mills.

Various types of calendar guards.

Elevators—How used and how to avoid accidents while being used.

Paper mill ventilation.

(Oct. 20, morning.)

Safety committee work in paper mills.

Maintaining interest in safety bulletin boards.

Safety in the Ontario pulp and paper manufacturers' plants.

Relation of the eight-hour day to safety.

Health and surgical problems of the paper industry.

TEXTILE SECTIONAL MEETING (OCT. 19, MORNING).

The safety work of the Ludlow Manufacturing Associates, by B. B. Fogler, Ludlow Manufacturing Associates, Ludlow, Mass.

Safety in southern cotton mills, by G. D. Bragdon, General Accident, Fire & Life Assurance Co., Philadelphia, Pa.

CEMENT SECTIONAL MEETING (OCT. 20, MORNING).

What has been accomplished by cement companies in safety work, by Robert Brinton Hill, Portland Cement Association, Chicago, Ill.

Electrical hazards, by R. J. Young, Universal Portland Cement Co., Chicago, Ill.

Safe practices in quarry and mill.

EMPLOYEES' BENEFIT ASSOCIATION SECTIONAL MEETING (OCT. 20, MORNING).

The mutual value to employer and employee of a benefit association, by J. N. Redfern, Chicago, Burlington & Quincy Railroad Co., Chicago, Ill.

The essential features of organizing benefit associations, by W. L. Chandler, Dodge Manufacturing Co., Mishawaka, Ind.

The statistical basis for assessments and benefits, by J. M. Eaton, Cadillac Motor Car Co., Detroit, Mich.

The doctor's work in a benefit association.

GOVERNMENTAL SECTIONAL MEETING (OCT. 20, MORNING).

Standardizing accident records, by Royal Meeker, United States Commissioner of Labor Statistics.

The accident problem as it concerns the general public, by Frederick L. Hoffman, Prudential Life Insurance Co., Newark, N. J.

Standardized Federal and State safety regulation, by E. B. Rosa, United States Bureau of Standards.

Marine safety regulations.

LOGGING, LUMBERING, AND WOODWORKING SECTIONAL MEETING (OCT. 20, MORNING).

Interesting the manufacturer in accident prevention work, by F. D. Campau, Furniture Manufacturers' Association, Grand Rapids, Mich.

Possibilities of preventing accidents in logging camps, through educational means, by J. J. Lingle, Westboro Lumber Co., Westboro, Wis.

How to organize a sawmill for safety, by F. A. Barker, Lumberman's Mutual Casualty Co., Chicago, Ill.

Safeguarding the most hazardous machines in woodworking plants, by Henry Burr, T. H. Mastin & Co., Kansas City, Mo.

Safe practices in lumber yards, by B. C. Christy, International Harvester Co., Chicago, Ill.

PUBLIC SAFETY SECTIONAL MEETING (OCT. 20, MORNING).

Public safety work of public service companies, by H. A. Bullock, Brooklyn Rapid Transit Co., Brooklyn, N. Y.

Ideal organization for public safety in a community, by Robert W. Campbell, Illinois Steel Co., Chicago, Ill.

Street traffic regulations as related to public safety, by William P. Eno, international traffic expert, Saugatuck, Conn.

Public safety education in the public schools, by R. B. Morley, Ontario Safety League, Toronto, Canada.

Practical aspects of public safety work, by Dr. William Burgess, Public Safety Commission of Chicago and Cook County, Chicago, Ill.

GERMAN WORKMEN'S INSURANCE CODE: AMENDMENTS RELATING TO INVALIDITY INSURANCE.

The bulletin (*Amtliche Nachrichten*) of the German Imperial Insurance Office, of July 15, 1916, reprints a federal law of June 12, 1916 (R. G. Bl. No. 127, p. 525), which makes several vital changes in those provisions of the workmen's insurance code which relate to old-age, survivors', and invalidity pensions.

The age limit for the payment of pensions is reduced from 70 to 65 years. The provision limiting the increase of the invalidity pension for children of dependents under 15 years of age to one and one-half times the amount of the invalidity pension has been removed, permitting an increase of one-tenth in the invalidity pension for each child without regard to number. The share of the invalidity institutes in providing pensions for orphans has been made a fixed rate for each orphan instead of a diminishing rate corresponding to the increase in the number of orphans. To provide for this increase in pensions, the weekly contributions of the insured in the different wage classes have been increased as follows:

Wage Class I, from 16 pfennigs ($0.038) to 18 pfennigs ($0.043).
Wage Class II, from 24 pfennigs ($0.057) to 26 pfennigs ($0.062).
Wage Class III, from 32 pfennigs ($0.076) to 34 pfennigs ($0.081).
Wage Class IV, from 40 pfennigs ($0.095) to 42 pfennigs ($0.100).
Wage Class V, from 48 pfennigs ($0.114) to 50 pfennigs ($0.119).

Articles 1294 and 1295, limiting survivors' pensions to a specified maximum, have been abrogated. Each person under the law must make contributions for a certain period, termed "waiting period," before entitled to a pension. Persons above a certain year of age at the time the system became effective as to them were credited with a certain number of weeks of waiting period for each year of their age in excess of 40 years. The new law lowers this age limit to 35 years, thereby reducing the period of actual contribution necessary in order to entitle to a pension.

The law also amends certain financial provisions of the code as to the keeping of reserves and the admission of special insurance institutes as carriers of the insurance.

The amendments of the new law as to weekly contributions and general reserve become effective January 1, 1917, and all of its other provisions on January 1, 1916. Claims as to old-age and orphans' pensions, and orphans' settlements pending on the day of the promulgation of the new law are subject to the provisions of the latter. Old-age pensions awarded under the new law do not, however, begin earlier than January 1, 1916.

A complete translation of the German Workmen's Insurance Code was published in Bulletin 96 of this bureau. At the time of the publication of this bulletin the Workmen's Insurance Code was in force only in so far as the measures for its administration were concerned. The provisions of book 4 (invalidity and survivor's insurance) and those of book 5, which regulate the relations of the carriers of the invalidity and survivors' insurance to the other insurance carriers, came into force on January 1, 1912. The third book of the code, relating to accident insurance, and that part of the fifth book which regulates the relations of the accident insurance carriers with the carriers of sickness insurance, became effective January 1, 1913, and the second book (sickness insurance) and all remaining provisions of the Insurance Code, came into force January 1, 1914 (R. G. Bl. 1912, No. 44).

A translation of the new law of June 12, 1916, follows:

LAW OF JUNE 12, 1916, RELATING TO PENSIONS UNDER THE INVALIDITY INSURANCE.

ARTICLE 1. Articles 1257, 1291, 1292, 1392, and 1397 of the Imperial Insurance Code are herewith amended as follows:

Article 1257.

Old-age pensions shall be received by the insured person beginning with the completed sixty-fifth year of life, even if he is not an invalid.

Article 1291.

If the beneficiary of the invalidity pension has children under 15 years of age, then the invalidity pension shall be increased for each child by one-tenth.

Article 1292.

The share of the insurance institute shall in the case of widows' and widowers' pensions amount to three-tenths, and in the case of orphans' pensions to three twentieths of the basic amount and of the increases of the invalidity pension, which the person providing their support had received at the time of his death, or, in the case of invalidity, would have received.

Article 1392.

Until further action, the following shall be collected as weekly contributions:

In wage Class I, 18 pfennigs ($0.043).
In wage Class II, 26 pfennigs ($0.062).
In wage Class III, 34 pfennigs ($0.081).
In wage Class IV, 42 pfennigs ($0.100).
In wage Class V, 50 pfennigs ($0.119).

Article 1397.

For covering the general cost, each insurance institute shall, beginning with January 1, 1917, set aside in its accounts 60 per cent of the contributions as general assets. The institute shall credit interest to the general assets set aside. The Federal Council shall determine the rate of interest on a uniform basis for the same periods of time as well as for the same contributions.

Art. 2. Articles 1294 and 1295 of the Imperial Insurance Code are herewith abrogated.

Art. 3. The text of paragraph 1 of article 65 of the introductory law to the Imperial Insurance Code is herewith amended as follows:

Insured persons who, when the insurance obligation for their branch of industry comes into force, have completed their thirty-fifth year of life shall be credited in the computation of the waiting term for the old-age pension with 40 weeks for each full year of their age in excess of 35 years and a proportionate number of weeks up to 40 for the part of such year in excess.

Art. 4. Special insurance institutes admitted by the Federal Council in pursuance of articles 1360 to 1380 of the Imperial Insurance Code shall without new admission by the Federal Council be considered as admitted up to September 30, 1916. Up to this date they must grant the old-age and survivors' pensions provided by the present law.

The supervisory authority shall determine the date up to which the special institutes must have made the required amendments in their by-laws. If a special institute does not comply in time with this provision, the supervisory authority shall amend the by-laws.

ART. 5. The provisions of this law relating to articles 1392 and 1397 become effective on January 1, 1917; all other provisions become effective on January 1, 1916.

ART. 6. Claims to old-age and orphans' pensions and orphans' settlements, as to which the procedure of determination is still pending on the date of the promulgation of this law, are subject to its provisions. Their nonapplication shall be ground for revision in cases in which the superior insurance office was not at the time able to apply them.

Claims to old-age or orphans' pensions and orphans' settlements which have been decided after December 31, 1915, shall be examined by the insurance institute in accordance with the provisions of this law, unless paragraph 1 is applicable. If this examination results in a decision more favorable to the claimant, or if the claimant demands it, a new decision must be rendered.

Old-age pensions awarded in pursuance of this law begin at the earliest with January 1, 1916.

ART. 7. Contribution stamps of the denominations prescribed in the former article 1392 of the Imperial Insurance Code may not be used after January 1, 1917. Nonvalid stamps may within two years after the expiration of their validity be exchanged for valid stamps of equal denomination at the places designated for their sale.

SWEDISH WORKMEN'S COMPENSATION LAW.

The Swedish Parliament on June 7, 1916, enacted a new compensation law for wage earners. This law, which goes into effect January 1, 1918, makes some important changes in the existing act of 1901. It changes the old law from one covering enumerated hazardous employments to one covering all employments. All wage earners, excepting home workers and children working for their parents, are entitled to compensation for injury providing their annual earnings do not exceed 5,000 crowns ($1,340). Children under 12 years of age and casual workers are excluded.

The new law reduces the waiting period from 60 to 35 days, compensation commencing on the thirty-sixth day after the occurrence of the accident. The law provides, however, that until a special law on sickness insurance shall have been enacted, the employer shall compensate the injured workman during the time of this waiting period, beginning with the fourth day after the accident. The benefits provided consist of medical and hospital care, drugs and surgical supplies, cash benefits equivalent to two-thirds of the daily wages of the injured, but graded according to the loss of earning power, yet not less than one-fourth of the total earnings. Pension payments are made for permanent disability. In the event of death there is paid a funeral benefit of one-tenth of the annual earnings of the deceased but not less than 60 crowns ($16.08), and to dependents, according to their number, certain graded amounts.

As under the previous law, the risk of the employer may be insured either in the state insurance institute or with a private insurance company.

DANISH WORKMEN'S COMPENSATION LAW.

The seven existing workmen's compensation laws in Denmark covering various occupations and industries have been combined or codified in a single law of July 6, 1916.

The new act covers, under separate chapters, fishermen, seamen, agriculture and forestry and related industries, and all employments in manufacturing industries. The former law enumerated employments and industries which were covered under the act. Besides accidental injuries, occupational diseases may be included under this act, these to be specified presumably by the insurance council which is established.

The new law continues the system of compensating the first 13 weeks of disability under the voluntary sickness insurance law. Compensation under this law, therefore, begins with the fourteenth week. The act provides the usual items of compensation: Cash benefits; permanent disability payments, graded according to the loss of earning power; compensation to survivors; and funeral aid. The cash benefits are limited to two-thirds of the total wages of the injured, but not exceeding 3 crowns (80.4 cents) nor less than 1 crown (26.8 cents). To survivors the maximum lump-sum payment is limited to 6,000 crowns ($1,608), with a minimum of 3,000 crowns ($804). Funeral benefits range from 120 crowns ($32.16) to 80 crowns ($21.44) according to the residence of the deceased.

The State contributes two-fifths of the necessary premium for the support of the insurance system except in the case of seamen, for whom it provides one-half of the contributions with certain exceptions.

The law goes into effect January 1, 1917.

BRIEF FOR HEALTH INSURANCE.

The quarterly issue of the American Labor Legislation Review (American Association for Labor Legislation, New York City) for June, 1916, under the above title, contains special articles on health insurance as a phase of paternalism, compulsory health insurance in Great Britain, tendencies of health-insurance legislation, and voluntary health insurance in New York City. Most of the volume, however, is devoted to the brief for health insurance (pp. 155 to 236), followed by a concise statement of principles to be regarded as fundamental in considering health-insurance legislation. Based on these principles a tentative draft of an act is submitted, and the volume closes with a bibliography on health insurance.

Mr. William Hard, the author of the first article, entitled "Is health insurance paternalism?" observes that a system of health insurance once inaugurated so operates as to induce the employer voluntarily to extend and maintain it. "Having got started, it goes forward. Having been coerced into self-activity, it self-acts beyond coercion." The system compels attention and interest in sanitation, because the amount of the contribution to the sick fund is dependent upon the amount of sickness prevailing. The employer is thus encouraged to make every effort to reduce the sick rate. In Germany the monthly sick insurance paid by nearly all employers "has been worth thousands of sanitary inspectors to the Imperial Government." Similar results are said to have obtained in Great Britain as a consequence of the compulsory health-insurance law of 1911. "Already there are indications," declares an official investigating commission, "that as a result of the rest obtained under the act a better condition of health has in certain cases been attained than has been experienced for many years."

Moreover, it appears that the whole antituberculosis movement has been strengthened. In 1911 Parliament made a grant of $7,200,000 to defray the expenses of sanitariums for both insured and noninsured persons, and for 1914 and 1915 the Government appropriated $1,464,000 and $2,300,000, respectively, to pay one-half of the expenses incurred by local authorities in treating for tuberculosis noninsured persons as well as the dependents of insured workers. Other results claimed for the system in England include an increased use of the midwife through the provisions of the maternity benefit, and a relief of the burden borne by the Poor law. The towns of Bristol and Manchester report a diminution of pauperism in 1913 as compared with 1912, which is attributed to the insurance act. Medical relief, unlike the practice under the Poor law, is rendered in the home, and this, it is stated, aided in preventing the breaking up of homes.

These and other benefits of a compulsory and State-wide system of health insurance are developed at some length in the "Brief for health insurance," which marshals the arguments in support of the system, quotes the opinions of authorities in the field, and cites official and private reports and investigations favorable to the adoption of a compulsory health-insurance plan. It is asserted that high sickness and death rates prevail among American wage earners, and authorities are cited to show that the amount of disability due to sickness among wage earners is high, particularly as a result of tuberculosis and degenerative diseases of middle life. An excessive infant mortality rate in the industrial population is declared to be "indicative of conditions which stand sorely in need of correction."

These conditions suggest the necessity for more extended provision for medical care among wage earners and more effective methods for meeting the economic loss due to illness. This seems particularly important since the wage earner, with an income generally less than $1,000 a year, does not possess the means to meet the expense of proper medical care. Furthermore, free hospital wards and dispensaries not only have been insufficient to care for the wage earners in time of sickness, but are objected to as charity by many workers. Although certain systems have been designed to insure against wage loss due to illness, they apparently are not fulfilling their purpose. Establishment funds are too few and limited in extent; commercial health insurance appears to be an excessively expensive method for recouping loss due to illness; fraternal insurance societies are not reaching the lower paid workers but rather the middle and higher classes; trade-union benefit funds are limited in extent, being confined to the better paid workers.

The methods followed in this country for the prevention of sickness and for its immediate relief have proved inadequate. Factory laws for the protection of the health and safety of workmen have been incomplete, while their administration too often has been defective. The economic loss due to tuberculosis, typhoid, and other infectious diseases, would suggest that the authorities to whom is entrusted their abatement have been unable to meet the situation.

The existing agencies noted above are declared to be ineffective in meeting the needs for financial relief and the prevention of illness among wage earners. It is furthermore asserted that voluntary subsidized insurance can not meet these needs if reliance may be placed upon the results achieved by such a system in various European countries. The limited benefits which have accrued to wage earners through voluntary health insurance as compared with the benefits extended to those who have profited by a compulsory health insurance system, in those countries in which the latter has been applied, are cited in support of the compulsory plan. It may be noted in this connection that while the voluntary health insurance system of France reached only 9 per cent of the population in 1911, the compulsory State health insurance system in Germany during the same year reached 22 per cent of the population of that country. Compulsory health insurance, therefore, is advanced as a proper method of securing adequate treatment, financial protection, and prevention of illness among wage earners.

The advantages cited in behalf of a compulsory health-insurance system, to which employers, employees, and the State shall contribute as sharers[1] in its benefits, are the following: (1) Certainty of insurance to all wage earners reasonably expected to require protection; (2) opportunity for simplified and economical administration; (3) the maintenance of a reserve, as under the voluntary system, is unnecessary inasmuch as under the compulsory system there will be a continuous accession of young lives. Under this system there will be provided the necessary medical care, drugs, and supplies, cash benefits, and relief from financial stress during illness; maternity benefits for the wives of insured workmen; and funeral benefits. The indirect results which may be expected to follow the adoption of a system of State health insurance will probably be as important as the direct results. "The great merit of the proposed legislation is the contribution it is certain to make to the cause of health conservation. Under this scheme health comes to have a cash value, not only to the employee but to the employer and the State, since all must contribute to the insurance fund."[2] Factory sanitation will be developed; preventive medicine may be expected to be stimulated; popular education on disease prevention will result; and governmental interest in a comprehensive campaign for sickness prevention will be intensified by reason of the Government having an interest in the system through its contribution to the sick fund. All these results have apparently been attained in those countries where the system has been tried.

"Thus compulsory health insurance not only meets the urgent need of the wage earner for medical care and for financial assistance during illness, but, of the various possible methods of insuring, it alone promises to distribute the cost fairly and wisely between employers, employees, and the State, while it also offers peculiar administrative advantages and can be counted on to give a powerful stimulus to the prevention of sickness. Compulsory health insurance is at once an economical method of providing for the needs of the wage worker and a mighty force for the inauguration of a comprehensive campaign for health conservation."

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[1] The State shall contribute one-fifth of the total expenditures for benefits, and one-half of the balance shall be paid by the employer and one-half by the employee, except that if the earnings of the insured fall below $9 a week the shares of the employer, employee, and State shall be the proportion indicated in the following schedule:

If earnings are—	Employer—	Employee—	State—
$9, but not under $8.	48 per cent.	32 per cent.	20 per cent.
$8, but not under $7.	56 per cent.	24 per cent.	20 per cent.
$7, but not under $6.	64 per cent.	16 per cent.	20 per cent.
$6, but not under $5.	72 per cent.	8 per cent.	20 per cent.
$5 or less.	80 per cent.	0 per cent.	20 per cent.

In all cases the contributions shall be computed as a percentage of the wages.

[2] Henry R. Saeger, professor of economics, Columbia University.

HEALTH INSURANCE AND THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association has recently taken up the study of health insurance. Through its council on health and public instruction, to whom was delegated the duty of developing the program of the association as regards health insurance—outlined in 1914 and reaffirmed in 1915—a special subcommittee was appointed in January, 1916, the report of which to the Detroit session of the association (June 12–16, 1916) appeared in the June 17 issue of the Journal of the American Medical Association (pp. 1951–1985).

This committee was charged primarily "to study social insurance in its relation to the medical profession." A special office was opened by the committee in New York and the services of a health-insurance expert secured to prosecute the study.[1] According to the report in question it is the intention of this committee to undertake the following duties:

> First. To educate the American medical profession in the general principles of social insurance, particularly health insurance, the economic and social significance of the movement to obtain such insurance throughout the United States, and the absolutely essential part which the medical profession must play in a successful adaptation of this new legislation to American conditions.
>
> Second. The bureau will consider it as part of its work to answer all questions which any physician may desire to write to it, asking for information, facts, or figures bearing on social insurance in any of its phases, and to be in reality a bureau of information for the medical profession in regard to the details of organization, of medical aid in various forms of social insurance, both in European countries and the United States.
>
> Third. The committee considers it its duty to appear when advisable before the legislative bodies in this country, with a view to bring about friendly understanding between all parties concerned and to protect the legitimate economic interests of the profession in the laws coming up for discussion concerning social insurance.

Apparently, then, it is the purpose of this committee to study health insurance with a view to securing the best interests of the medical profession in the adoption of any system by the Nation or by the different States. In its review of the field of social insurance, as practiced in foreign countries, it emphasizes particularly the part that the medical profession plays in its application. Health insurance in the United States, as afforded through private, voluntary agencies, is touched upon, and criticism is made of the methods employed by these agencies in engaging the services of physicians.

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[1] The committee consisted of H. B. Favill (since deceased), Alexander Lambert, and Frederic J. Cotton, the first two being chairmen, respectively, of the council on health and public instruction, and the judicial council. The expert engaged by the committee was Dr. I. M. Rubinow.

> The whole service and the capitation system under which it is possible is held as the criterion of what is dishonorable and contemptible in the practice of medicine. The results to the unfortunate physician who must give this service are disproportionately severe for his responsibility in the matter. The vicious circle is formed by certain economic situations, and this circle can not be broken except by a change of the economic forces. Compulsory insurance by the State can alone solve these economic problems of the very poor and release the unfortunate physician who, facing starvation, must accept this lodge practice.

This criticism is mainly directed against the fraternal lodges.

The report under review reprints the proposed health-insurance act drafted by the American Association for Labor Legislation, and concludes as follows:

> This voluminous report has made no pretense of arguing for or against health insurance. It has made no attempt to bring together the advantages or disadvantages to be gained by the community or its desirability as a measure of health or social necessity. The committee on social insurance offers it as a compilation of what has been done abroad and of the present situation in the United States. It has brought forward only those points which would seem to be of interest to the medical profession and which will be useful to them in preparing a study of the situation in any given State in this Union where health insurance is likely to be brought up and placed on the statute books.
>
> The effective administration of any health insurance law must be done through limitation by trade or geographic area of its application. This is clearly seen in the working abroad of the various laws in the different countries. The English law is difficult of administration because it violates this fact. Germany and Austria show marked effectiveness because their laws follow this peculiarity. Furthermore, the results obtained in working out the details of the law will be greatly influenced by the financial management of it. In Germany the percentage of expense borne by each member—the employer, the employee, and the State—is designated in percentage, the actual amounts necessary being left to experience and management to obtain. In England a definite monetary amount was laid down by law, and with the errors of actuarial calculation, it has been found that these amounts are insufficient to give the desired results to the workers. Eighteen cents a week as a premium was insufficient to give a full measure of sick benefits to the workers or just remuneration to the physicians and medical benefits to the sick, let alone the expenses for administration. The English law fails to give more than the ordinary medical service and gives but a minimum of surgical apparatus and appliances, with the result that the sick do not receive the care they should, though the physician is justly remunerated, and the lack of proper appliances keeps many sick on the sick benefit funds at the unnecessary expense of the insurance carriers. In Germany the generous application of medical benefit and surgical appliances brings back the tremendous saving in time and wages. As was pointed out by the judicial council last year, the expense of $8,000 to specialists saved over $160,000 in wages and sick benefits.
>
> However one may criticize the details, the insurance act has unquestionably improved the condition of the working classes which have come under the

law. This is a very noticeable feature in England. It will be of great interest to note in the future the effect of the great war on these countries and on the laws of social insurance.

The committee on social insurance has endeavored to bring forward as much detail as possible regarding the remuneration of physicians under these laws, in order that the economic results on the lives of the physicians could be fairly studied.

The more these laws of social insurance are studied the more it is evident how essential is the medical profession in their administration. It is equally essential that the profession should clearly understand these laws, and the committee on social insurance therefore offers this study of health insurance for the assistance of the profession in obtaining this necessary information.

STRIKES AND LOCKOUTS IN FOREIGN COUNTRIES.

AUSTRALIA.

Continuing the investigation of strikes and lockouts which was begun in 1913 the Australian Bureau of Census and Statistics[1] notes the occurrence of 358 labor disputes during the year 1915 as compared with 337 in 1914 and 208 in 1913. A fewer number of establishments were, however, involved in 1915 as compared with 1914—942 and 1,203, respectively; in 1913 the number was 921. On the one hand the number of workers directly affected increased steadily, being 33,493 in 1913, 43,073 in 1914, 57,005 in 1915; on the other hand average duration of the disputes, omitting 522,967 days lost in connection with the dispute in the northern coal fields in 1914, shows a very notable decrease from year to year—12½ days in 1913, 8⅓ in 1914, 7¼ in 1915.

A greater prevalence of industrial disputes is noted in New South Wales as compared with the other States, a fact accounted for largely by the coal mining industry, in which most of the disputes in that State occur. Mining and quarrying, as a matter of fact, furnish a very large proportion of disputes throughout the whole Commonwealth. For the year 1913 the proportion of disputes in those industries represented approximately 50 per cent of the total number recorded; in 1914 the proportion was 55 per cent and in 1915, 57 per cent.

The wage question was responsible for the greatest number of industrial disputes for each of the years 1914 and 1915. The next most important causes were "employment of particular classes or persons" and "working conditions and discipline," followed by "trade-unionism." The following table shows the causes of industrial disputes commenced in Australia in 1915:

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[1] Commonwealth Bureau of Census and Statistics, Labor and Industrial Branch, Report No. 6. Prices, purchasing power of money, wages, trade-unions, unemployment, and general industrial conditions, 1914–15. May, 1916, pp. 99–124, Melbourne [1916]. 183 pp.
Labor Bulletin, No. 13 (January to March, 1916), pp. 84–99 [Melbourne], July, 1916. 104 pp.

CAUSES OF INDUSTRIAL DISPUTES COMMENCED IN 1915.

Item.	Number of disputes.	Number of work-people involved.	Number of working days lost.
1. Wages—			
(a) For increase	73	18,783	190,645
(b) Against decrease	10	1,113	12,555
(c) Other wage questions	46	11,990	133,606
2. Hours of labor—			
(a) For reduction	3	896	836
(b) Other disputes re hours	6	2,643	23,374
3. Trade-unionism—			
(a) Against employment of nonunionists	19	3,873	31,145
(b) Other union questions	16	3,739	7,434
4. Employment of particular classes or persons	76	13,844	77,862
5. Working conditions	76	16,114	82,322
6. Sympathy	6	950	6,004
7. Other causes	27	7,347	17,442
Total	358	81,292	583,225

In comparison with 1914 the results of disputes commenced during 1915 appear to have been substantially more in favor of the employees.

INDUSTRIAL DISPUTES, ACCORDING TO RESULTS.

	1914			1915		
	Number of disputes.	Number of workmen affected.	Number of days lost.	Number of disputes.	Number of workmen affected.	Number of days lost.
In favor of workpeople	118	21,224	129,995	190	44,140	245,625
In favor of employer	98	18,242	119,819	78	15,327	155,659
Compromise	110	30,396	829,265	68	14,860	151,544
Indefinite	11	1,187	11,316	22	6,965	30,397
Total	337	71,049	1,090,395	358	81,292	583,225

Direct negotiations between representatives of employers and employees formed the most popular method for the settlement of disputes, accounting for the termination of approximately 70 per cent of the industrial disputes in 1914 and in 1915. During the year 1915 the report notes a decided increase in the number of disputes in which a third party (not officials under the Commonwealth or State industrial acts) was required in the capacity of arbitrator.

The first quarter of 1916 seems to show a relative increase in the number of labor disputes in Australia. During that quarter there occurred 132 disputes, "the second largest number recorded in any one quarter since particulars have been collected by this bureau (1913), and only 17 less than in the fourth quarter of 1915. The number of persons involved, either directly or indirectly, in these disputes totaled 40,185. New disputes entailed a loss of 407,724 working-days, and old disputes 30,138, making an aggregate loss in working-days of 437,862, and a total estimated loss of wages of £274,369 [$1,335,217]. Of the total number of disputes all, with the exception of 14, terminated within the quarter under review."

AUSTRIA.

For the year 1914 the Austrian Bureau of Labor Statistics reports 260 strikes, affecting 794 establishments and participated in by 33,412 striking workmen out of a total of 72,805 employed in the establishments affected. The following table permits a comparison of the strike movement in Austria during the last 5 years:

GENERAL STATISTICS OF THE STRIKE MOVEMENT IN AUSTRIA, 1910-1914.

Year.	Strikes.	Establishments affected.	Workers employed in establishments affected.	Striking workers.	Workdays lost.	Workers employed—	Striking workers—	Establishments affected—	Striking workers—	Workdays lost—
						Per establishment affected.		Per strike.		
1910	657	2,888	108,464	55,474	1,129,460	37.6	19.2	4.4	84.4	1,719.1
1911	706	3,507	103,390	122,001	1,710,277	55.1	34.8	5.0	173.0	2,423.0
1912	761	2,818	211,743	120,953	1,862,027	75.1	42.9	3.7	159.0	2,446.8
1913	438	1,024	88,150	39,814	409,353	86.1	38.9	2.3	90.9	889.0
1914	260	794	72,805	33,412	264,354	90.4	42.1	3.1	128.5	1,016.7

The number of strikes during the year under review was the smallest since 1895. This is partly due, it is stated, to the economic depression immediately before the war and partly to the war itself. The individual strikes, however, were more extensive than in the preceding year, the number of establishments affected, striking workers, and workdays lost having increased in comparison with 1913, if computed per strike. The establishments affected by strikes in 1914 were on an average larger than in the nine preceding years, considering the number of workmen employed in them and the number of strikers. If only industry groups with at least 10 strikes are considered, the strikes in 1914 were distributed as follows:

STRIKES IN AUSTRIA DURING 1914, BY INDUSTRY GROUPS.

Industry group.	Strikes.		Establishments affected.		Strikers.		Workers employed.		Workdays lost.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Mining	28	10.8	39	4.9	14,475	43.3	25,689	35.3	35,465	13.4
Stones, earths, clay, and glass	31	11.9	76	9.6	2,429	7.3	3,850	5.3	46,202	17.5
Metal working	24	9.2	47	5.9	2,379	7.1	4,615	6.3	22,561	8.5
Machinery, apparatus, instruments, etc	19	7.3	23	2.9	1,035	3.1	14,205	19.5	5,826	2.2
Woodworking, rubber	15	5.8	122	15.4	830	2.5	1,016	1.4	31,249	11.8
Textiles	33	12.7	37	4.7	2,856	8.5	7,369	10.1	28,088	10.6
Clothing, cleaning	24	9.2	275	34.6	1,481	4.4	2,998	4.1	22,801	8.6
Foodstuffs	19	7.3	48	6.0	1,000	3.0	2,242	3.1	3,830	1.4
Building trades	42	16.2	97	12.0	5,510	16.5	8,733	12.0	55,130	20.9
Other industries	25	9.6	30	4.0	1,417	4.3	2,088	2.9	13,202	5.1
Total	260	100.0	794	100.0	33,412	100.0	72,805	100.0	264,354	100.0

As to the duration of the strikes, 124 (47.8 per cent), involving 16,058 strikers (48.1 per cent), lasted less than 6 days, while 71 strikes (27.4 per cent), involving 12,149 strikers (36.4 per cent), lasted from 6 to 15 days, so that the number of strikes lasting over 15 days formed less than one-fourth of the total number. Demands relating to wages in 203 instances (78.1 per cent), to hours of labor in 54 instances (20.8 per cent), and to organization in 57 instances (21.9 per cent), were the most frequent causes of strikes. Considered from the viewpoint of the strikers, 22.7 per cent of the strikes, involving 35.1 per cent of all strikers, were terminated successfully; 39.2 per cent of the strikes, involving 38.6 per cent of all strikers, were compromised; and 38.1 per cent of the strikes, involving 26.3 per cent of all strikers, failed. Workmen's organizations intervened in 126 strikes and employers' organizations in 14. Mediation by State or other authorities was attempted in 62 strikes.

A total of 18 lockouts is reported for 1914. They involved 50 establishments, employing 9,900 workmen, of which number 6,917 (69.9 per cent) were locked out, losing a total of 115,591 workdays. The two most important lockouts took place in two shipbuilding yards, in which 3,921 workmen were locked out, with a total loss of 97,362 workdays. Compared with the preceding year, in which 23 lockouts, affecting 1,675 establishments and 22,258 locked-out workmen out of 30,296 employed, were reported, the lockouts of 1914 were of relatively small importance. The majority (12) of the lockouts lasted less than 31 days.

SWEDEN.

There has been a decline in the number of strikes in Sweden occurring during the war, as compared with years prior thereto. Thus, according to a recent report of the Swedish bureau of labor, the number of strikes in 1915 was less than in any preceding year since 1903, except 1910. In the latter year there were 66 strikes, while during 1915 there were 70. In 1915 there were 7 lockouts and 3 disputes of an indefinite character, making a total of 80, as compared with 76 disputes of every character in 1910. The 80 disputes occurring in 1915 affected 110 employers and 5,119 employees, as compared with 115 disputes in 1914, affecting 247 employers and 14,385 employees. Since the above report was issued by the Swedish labor office, 31 labor disputes are reported as having occurred in the first quarter of 1916.[1] These latter involved 44 employers and 2,510 workmen.

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[1] Sociala meddelanden utgivna K Socialstyrelsen. Stockholm, 1916. No. 6.

The average number of workers affected by each strike in 1915 was 64, somewhat greater than in 1914 (61).

By industry groups it appears that the largest proportion of workers affected in 1915 were those in the building trades, or 30 per cent, which compares with 21 per cent as the average for the same trade for the whole period 1903 to 1914.

As to duration, 35 per cent of the conflicts in 1915 did not extend over a week, while 76 per cent were terminated within a month, and 15 per cent extended from 31 to 90 days, inclusive, while 3 per cent continued for a period of over 180 days.

A larger proportion of the strikes in 1915 were favorable to the workers than during the period 1903 to 1914. The results are rather striking, as shown in the following tabulation:

RESULTS OF LABOR DISPUTES AND NUMBER OF WORKERS AFFECTED, 1903-1914 AND 1915.

Result.	Labor disputes.				Workers affected.			
	1903-1914		1915		1903-1914		1915	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
In favor of employers	634	30	17	21	338,441	66	638	12
In favor of workers	635	30	27	34	30,990	6	2,201	43
Compromised	728	35	29	36	238,290	27	2,083	41
Result not reported or indecisive	115	5	7	9	4,508	1	197	4
Total	2,112	100	80	100	512,229	100	5,119	100

Relating the causes of strikes to their results, it appears, as is well known, that those strikes in which the demand was for an increase in wages were most generally compromised. Thus, of the 39 strikes (49 per cent of all strikes) caused by a demand for increased wages in 1915, affecting 2,327 workmen, 22, affecting 1,722 workmen, were compromised, while only 8 terminated in favor of the employers and only 7 in favor of the workmen.

Examination of the relation between the duration of strikes and their results shows that, from the point of view of the number of disputes, the workers were most successful in conflicts of long duration, while those of short duration were generally compromised.

Arbitration settled 3 strikes and the official conciliators contributed to the settlement of 21.

The principal data concerning strikes in Sweden since 1903 are contained in the following statement:

STRIKES AND LOCKOUTS IN SWEDEN, 1903 TO 1915.

Year.	Strikes.			Lockouts.			Disputes of indefinite character.			All disputes.			Number of work-days lost.
	Number of strikes	Number of employers affected.	Number of workers affected.	Number of strikes	Number of employers affected.	Number of workers affected.	Number of strikes.	Number of employers affected.	Number of workers affected.	Number of strikes	Number of employers affected.	Number of workers affected.	
1903..	109	256	5,970	16	96	982	17	126	17,619	142	478	24,571	642,000
1904..	169	383	8,299	12	62	1,218	34	153	2,731	215	598	12,248	386,000
1905..	152	325	13,186	12	12	456	25	510	19,264	189	847	32,906	2,390,000
1906..	239	668	15,050	8	12	560	43	49	3,045	290	729	18,655	479,000
1907..	243	498	11,278	23	37	5,669	46	283	6,593	312	818	23,540	514,000
1908..	229	473	17,187	38	125	2,672	35	826	20,498	302	1,424	40,357	1,842,200
1909..	102	7,707	229,248	22	451	71,364	14	30	1,137	138	8,188	301,749	11,739,700
1910..	66	127	3,420	5	5	101	5	14	150	76	146	3.671	39,000
1911..	85	150	4,940	9	1,759	15,145	4	11	491	98	1,920	20,576	569,800
1912..	108	168	5,797	4	337	2,166	4	284	2,017	116	789	9,980	292,145
1913..	118	203	9,574	1	1	17	....	....	....	119	204	9,591	303,344
1914..	105	101	8,832	8	64	5,368	2	2	185	115	247	14,385	620.469
1915..	70	100	4,277	7	7	813	3	3	29	80	110	5,119	83,270

A LIVING WAGE BY LEGISLATION: THE OREGON EXPERIENCE.[1]

"A Living Wage by Legislation"[1] is the title of a pamphlet setting forth the experience in Oregon under the operation of the minimum-wage law passed by the legislature in 1913 and administered by the State Industrial Welfare Commission. The volume contains the code of rulings and orders issued by the commission, a reprint of the act creating the commission, extracts from certain decisions of the Supreme Court of Oregon, and the text of the Oregon 10-hour law for women.

The presentation of this subject by the chairman of the Industrial Welfare Commission is premised upon the principle that it is the duty of the State, by wise and adequately enforced legislation, to prevent any large section of its people from falling below decent standards of living, which condition, it is claimed, would result in economic, social and domestic evils, individual demoralization, and in national weakness. One of the most important features of such legislation, it is declared, is the provision for a living wage.

In reviewing foreign experience in this connection, minimum-wage legislation enacted in the Australian States and in New Zealand is particularly noted, with special reference to the principles governing the action of the Australian court of conciliation and arbitration as outlined by Justice Higgins in an article published in the Harvard Law Review and reprinted in the MONTHLY REVIEW for February, 1916 (pp. 1 to 22). In the United States minimum-wage legislation, with one exception,[1] is administered by commissions or boards, the first being established in Massachusetts in 1912.[2] All legislation of this character applies only to women and children, and has followed in certain important features the Massachusetts law.

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[1] A Living Wage by Legislation: The Oregon experience. By Edwin V. O'Hara, chairman of the Industrial Welfare Commission of the State of Oregon. Salem, 1916. xxiii, 57 pp.

As already stated, the Oregon law was enacted in 1913, after a comprehensive survey of wages and hours and conditions of labor of women workers, and the Industrial Welfare Commission, which began work in June of that year, was concerned not only with the regulation of wages but the fixing of maximum hours and the establishment of sanitary conditions of labor. Failing in an attempt to induce employers voluntarily to adopt standards of hours and wages and conditions for their women workers, the commission resorted to the policy of issuing mandatory rulings, which constituted the first minimum-wage determinations made by any commission in the country. These orders have been since revised, effective September 1, 1916. They provide for a minimum weekly wage rate for experienced adult women workers, ranging from $8.25 in the smaller towns of the State to $9.25 in certain occupations in Portland. One feature of the revised orders is a provision for a rise every four months during the year in the wage scale allowed for apprentices. Other provisions of the code relate to the limitation of daily hours of labor, the prohibition of night work, the requirement of one day of rest in seven, a 45-minute lunch period, and general sanitary regulations.

The report refers to the fact that minimum-wage legislation in this country has been applied only to women because of the fear that legal interference with the contractual freedom of men might be declared unconstitutional, and then quotes from the decision of the United States Supreme Court, which, in upholding the Oregon 10-hour law for women, laid down broadly the grounds upon which welfare legislation interfering with the freedom of contract of women would be upheld by the courts while similar legislation would not be sustained for men.

Two cases are cited in which the constitutionality of the minimum-wage law was attacked—one resulting in a decision by the Supreme Court of Oregon upholding the constitutionality of the law and the other resulting in a similar decision, which was subsequently appealed to the United States Supreme Court, where the argument was heard on December 17, 1914.[3] The author argues that minimum-wage legislation does not interfere with the freedom of contract, and in support of his position quotes from Justice Higgins, president of the Australian court of conciliation and arbitration:

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[1] In Utah the minimum wage has been fixed by direct act of the legislature.

[2] The States which have minimum-wage laws are Arkansas, California, Colorado, Kansas, Massachusetts, Minnesota, Nebraska, Oregon, Utah, Washington, and Wisconsin.

[3] No decision was rendered, and the case is to be reheard this fall.

> The imposition of a minimum wage * * * implies, of course, an admission of the truth of the doctrine of economists, of all schools, I think, that freedom of contract is a misnomer as applied to the contract between the employer and an ordinary individual employee. The strategic position of the employer in a contest as to wages is much stronger than that of the individual employee. "The power of the employer to withhold bread is a much more effective weapon than the power of the employee to refuse to labor." Low wages are bad in the worker's eyes, but unemployment, with starvation in the background, is worse.

In regard to the effects of the Oregon minimum-wage law the author cites the report of an investigation, especially of mercantile establishments, undertaken jointly by the Federal Industrial Relations Commission and the United States Department of Labor, the results of which are set forth in Bulletin 176 of the Bureau of Labor Statistics. In general the report shows that—

1. Men have not taken women's places.
2. The minimum rate of pay for the experienced adult workers was raised in all occupations. The per cent of the force receiving $12 and over increased after the wage determinations.
3. Average weekly earnings increased 10 per cent for the total number of women employed in 1914. And this, it will be observed, at a time of financial depression, when a 10 per cent cut in wages would have occurred except for the wage rulings.

Occasion is taken in the report to differentiate between the wage rate and the contents of the pay envelope. The one might be largely increased, while the other, owing to unemployment, might still be far below the necessary cost of decent subsistence. It was found, however, in the investigation mentioned above, that while the wage law caused an advance in the wage rate it resulted in a still more marked increase in weekly income, indicating a tendency to regulate employment and to reduce the evils of unemployment.

Another result of wage legislation in Oregon, it is pointed out, has been to stimulate the movement for vocational education. "The elimination of the unregulated apprenticeship system, with its miserable pittance of a wage and generally inadequate training, has been altogether wholesome. It has brought employers and technical school authorities together in conference, with the promise of good both to the schools and the shops."

In discussing the employers' viewpoint the report seeks to correct the impression that minimum-wage legislation is opposed by representative employers. "A legal minimum wage destroys the advantage which unscrupulous employers who are willing to cut wages below the subsistence level have always enjoyed over their more decent competitors. Respectable employers have not been slow to recognize this fact."

At public hearings held in the spring of 1916, at the time the rulings were revised, "while many employers manifested opposition to further reduction of working day, opinion was practically unanimous in favor of minimum-wage legislation."

In conclusion, the author of the report submits arguments in favor of a minimum wage, contradicting the position that girls enter industry to make "pin money" and that they are "living at home" and consequently do not need a living wage, and suggesting that "underpaid women workers are denying themselves the necessities of life in order to lead lives of virtue," that they "are living on one or two meals a day, are denying themselves clothing necessary to maintain their health, and are huddled together in rooms devoid of light, ventilation, and of heat. These are facts * * * of a character to create public sentiment of a permanent sort in favor of minimum-wage legislation."

OBJECTIONS OF MASSACHUSETTS EMPLOYERS TO THE STATUTORY MINIMUM WAGE.[1]

"The executive committee of merchants and manufacturers of Massachusetts, relative to the minimum wage," representing more than 20 industries, has issued a 58-page pamphlet setting forth its conviction, based on the statements and experience of a number of manufacturers, notably those making brushes, that the present legislative minimum wage in Massachusetts is weak and unjust, an economic error and a menace to capital and labor alike, and that it is the result of the efforts primarily of those "whose livelihood is largely derived from service in this or that 'social welfare' organization, theorists on sociology, an occasional college professor, and, finally, a large proportion of well-to-do women whose sympathetic tendencies far outweigh their analytical grasp of the laws underlying the business and economic relations of mankind."

The pamphlet reviews the history of minimum-wage determinations from the beginning of industrial development down to the experience of Australia, New Zealand, and, finally, of the United States, where, beginning with Massachusetts in June, 1912, 11 States have enacted legislation of this character. Although only two decrees are now in effect in Massachusetts—in the brush industry[2] and in retail stores—the report states that "in those two industries enough havoc has been wrought to indicate sufficiently what the larger industries may expect when reached."

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[1] The minimum wage, a failing experiment, together with some side lights on the Massachusetts experience. Published by the executive committee of merchants and manufacturers of Massachusetts. Boston, 1916. 58 pp.

[2] A statement of the effect of the minimum-wage decree upon the brush industry, based upon the report of the minimum-wage commission as presented in their Bulletin No 7, Sept. 15, 1915, will be found in the MONTHLY REVIEW for December, 1915, pp. 33–36.

> The most ardent proponents of this kind of legislation admit it is an experiment. We emphatically maintain that as an experiment, wherever it has been tried in this country, it is languishing, and that the experiment in this State has been given ample time to develop at least some favorable aspects.

The pamphlet is devoted largely to the presentation of the employers' viewpoint, supplemented, however, by an appendix indicating that trades-unionists "in direct proportion to the thought or analysis which they give to the statutory minimum-wage problem, vary all the way from enthusiastic support to severe condemnation of interference by the State with the question of wages." The contention of the employers is summed up in the following statement:

> Nothing but growing irritation, unemployment with its consequent hardships to needy girls, substantial loss of interstate business, and the reduction of pay rolls have appeared in the nearly three years since the law went into effect.

Assuming, therefore, that the minimum wage is uneconomic and unjust and has failed in practice, the authors of the pamphlet proceed to point out objections to this legislation and to the principle upon which it is founded, citing the opinions or experience of various business men in support of their contention that such legislation is of no benefit to the employee and has resulted in injury to employers. These objections may be stated as follows:

> 1. One of the most fundamental objections to the legislative minimum wage is the false assumption by its advocates that the limited class of persons who happen to be employers of labor at the time should be forced by State edict to bear the entire burden of enabling the wage-earning community to live according to the standards set by the cost of normal and healthful living. Every one of us wants to see this standard set and established for all, but it must be done in a sound way. The problem of livelihood and health is not an industrial but a community problem, and must be met by the community and not by class legislation which singles out a particular group (the employing class) of the community to bear the brunt of the burden. The practical effect of the minimum-wage law is to place upon the shoulders of the employer the entire burden of redeeming society, in the economic sense. It seeks to compel them (the employers) exclusively to remedy and solve the self-evident economic injustices and inequalities which we all know exist in our present-day system—forgetting that the employing class is but one organ of the organism of society.
>
> 2. Another one of the inherent disabilities is that this legislation gets us nowhere, because its results are circular and therefore vicious. The admitted basis of minimum-wage decrees in various industries is "the necessary cost of living" and the "maintenance of the workers in health."

It is argued that an increase of wages is reflected in an increase of prices, which leads to an increase in the cost of living, which in turn leads to a demand for further increase in the minimum wage.

> 3. If * * * we say that in some industries the increased cost of minimum wage is met by the wholesale discharge of workers with consequent unemployment, rather than by shifting the burden to the consumer (and this is an actual fact), then we have only seized another horn of the dilemma. For this result is as deplorable, perhaps more so, than the other, since the evil is thus fixed upon those least able to bear it, and the State is not only well-nigh made a partner with the iniquity, but becomes a direct factor in causing hardships far exceeding those existing even under the lowest sweatshop wage, however abhorrent this may sound.

It appears that business men of Massachusetts have contended all along that the real effect of minimum-wage decrees—for instance, in the retail stores—would be to establish, among other evils, a method by which very young girls would be employed during the apprenticeship period at the rates fixed for that class of workers (which are considerably below the so-called minimum-wage standard for experienced workers) and that these young workers would be retained only during the apprenticeship period and would then be discharged just as they were becoming eligible for the standard wage, new girls of the same immature age then being hired in their place. In Appendix A instances are given, covering not only the retail stores, but also the brush industry, of the effect of minimum-wage determinations, which seem to bear out this contention. The following summary of the report of a certain brush manufacturer, whose business was established more than a hundred years ago, is offered as indicating the facts concerning the unemployment resulting from the introduction of the minimum-wage decree.

> These figures rendered by a registered public accountant show a decrease of 195 women and minors employed in this factory between the dates of September 18, 1913 (which was prior to the adoption of the decree), and September 16, 1915 (which was about 13 months after the going into effect of the minimum-wage decree in the brush industry). This tremendous decrease (over 48 per cent) in the number of female and minor workers is a hard nut for the minimum-wage commission to crack. The stubborn fact is that because of the minimum-wage decree this factory was obliged to discharge 195 women and girls, while the decrease in workers caused a loss in the weekly pay roll of $853.76. This weekly loss, figured in annual terms, would mean $44,395.52 in this one factory. This is for women and minors alone. There was a further loss in this factory owing to the discharge of men workers occasioned by the minimum-wage law of $384 weekly, which added to the former figure, makes a total loss of $64,363.52 annually. The wage-earning community and all classes of our business life is therefore seen to have suffered on this basis in the 18 months up to March 1, 1915, a loss of $96,545.28, which would otherwise

> have been in circulation and added correspondingly to our economic strength.[1] Can the minimum-wage commission produce any figures to show as a result of all their activities that they have been able to increase wages to any class of workers to an amount sufficient to offset this substantial decrease caused by the partial incapacitation of one factory alone? Careful analysis of their various bulletins fails to disclose such a possibility.

These facts prove, declares the report, that there is no escape from the conclusion that the continued administration of the present minimum-wage law in Massachusetts, even for a year longer, presents the utmost menace to the workers themselves.

As to the attitude of labor regarding the minimum wage, it has already been suggested that "there is far from unanimity of belief among trades-unionists as to the merit or desirability of minimum-wage laws. In Appendix C this point is set forth in detail, indicating "that among the more serious-minded thinkers in the labor world the statutory minimum wage and its past history of disaster is feared rather than loved. Its small temporary benefits to a limited number are far outweighed by the danger to labor and to the highly paid skilled expression of labor contained in the legal precedents established by a State legislating along these lines."

> Whether we have a compulsory or a noncompulsory law, so long as the State attempts to work out this problem by itself, whether through fines or the sort of obnoxious boycott contemplated by the present law, our economic sickness will only increase, and irritation between the classes and especially against the administering body will approach nearer and nearer the boiling point.

The committee concludes with a plea for repeal of the obnoxious law.

The committee points out the seriousness of the constitutional question involved and cites two cases now pending in the supreme court of the State—cases growing out of the activities of the minimum-wage commission in the laundry and confectionery industries. The following appendixes conclude the report:

A. Unemployment and loss of business in Massachusetts.

B. Minimum-wage law in brush manufacturing.

C. Trades-unionism and the minimum wage.

D. Commentary on Prof. Taussig's article.

E. The minimum-wage commission—a semijudicial body or a crusading and dual organization.

F. Massachusetts minimum-wage law summarized.

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[1] A recent statement submitted by the president of this company to the executive committee indicates that the company has paid for wages, since the introduction of the brush decree, to date, nearly $200,000 less than would otherwise have been the case had no decree been forced upon them.

SURVEY OF INDUSTRIAL CONDITIONS IN SPRINGFIELD, ILL.

The Springfield survey was instituted by the Springfield survey committee and conducted under the direction of the department of surveys and exhibits of the Russell Sage Foundation for the stated purpose of improving social and living conditions in this Illinois city of nearly 58,000 inhabitants, 81 per cent of whom are American born. Of the inhabitants over 10 years of age 53 per cent were, according to the census of 1910, employed in gainful occupations. Most of the facts presented in the recently issued report[1] were collected during the spring and early summer of 1914. In general the plan was to visit factories and mercantile establishments in order to examine physical conditions and gather data regarding hours, wages, and similar matters; and to call upon workers in their homes for the purpose of securing from them a full statement of their employment conditions. Information was also secured from labor organizations and a detailed study was made of the local branch of the Illinois State free employment agencies. Although Springfield is not essentially a manufacturing city, it ranks eleventh in the number of factory wage earners and fourteenth in the value of its products, the most important manufacturing industries being the making of gristmill products, shoes, zinc products, watches, agricultural implements, and electrical supplies.

The report contains the following statement of general principles and minimum standards which, it is stated, furnished a basis upon which to consider the problems of social welfare and the recommendations for betterment resulting therefrom:

> First and elementary among these matters are working conditions. These should be made as wholesome and safe as possible. Fire hazard should be minimized, machinery guarded, sanitary conditions maintained, industrial diseases prevented, and good light and ventilation provided. The maintenance of such conditions is a first responsibility of the employer.
>
> Second. Until children are 16 years of age, it is essential that they develop normally and receive training for the work of life. Any occupation, therefore, is objectionable which interferes with such development or training. Under 14, children should not be employed in gainful occupations.
>
> Third. Hours of labor should not be so long as to injure health or to deny workers opportunity for self-improvement, the development of home life, and an intelligent interest in public affairs. Eight hours for a day's work is a standard which is now widely accepted.
>
> Fourth. Every worker should have one day of rest in seven.
>
> Fifth. Women and children should not be employed at night.
>
> Sixth. Workers who give their full working time to an industry should receive as a very minimum a wage which will provide the necessities of life.

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[1] Industrial conditions in Springfield, Ill. A survey by the committee on women's work and the department of surveys and exhibits, Russell Sage Foundation, by Louise C. Odencrantz and Zenas L. Potter. Philadelphia, 1916. 173 pp. Illustrated.

> Seventh. Either the "necessities of life" should include enough to allow workers to carry insurance and save something for old age or else industry should provide directly for the care of incapacitated workmen and for the dependents of workmen who are killed or used up at work, through payment made by the employer—the cost to be distributed over society by some form of insurance or other method.
>
> Eighth. Irregularity of employment should be minimized, and when workers lose their positions adequate facilities should exist to help them find new places.
>
> Ninth. The bargaining power in settling the terms of the work agreement should be as evenly balanced as possible as between the employer and the employee. This would recognize the right of employers and employees alike to organize or form unions.

Following a brief introduction, the report considers industrial conditions in Springfield from the standpoint of physical safety in industry, child labor, wages and regularity of employment, and hours of labor, and presents a study of conditions in 100 wage earners' families, including 573 persons, of whom 272 were gainfully employed. A concluding chapter summarizes the findings of the survey and gives specific recommendations for industrial betterment.

Physical safety in industry was considered from three standpoints—danger from accidents other than fire, from fire, and from diseases. The report notes the incompleteness of the data as to fatal and nonfatal accidents in Springfield, presents a brief review of the provisions of State legislation for the safeguarding of workers, comments on the nonenforcement of law, offers suggestions to be adopted for adequate protection from fire, reviews working conditions which especially induce occupational diseases, outlines the provisions and points out apparent defects in the Illinois workmen's compensation law, and then presents the main facts developed by the survey regarding physical safety in industry in a summary from which the following paragraphs are excerpts:

> No establishment visited showed marked disregard for the safety and physical welfare of its workers. Some showed unusual care. Nevertheless * * * large numbers of employees were subjected to well-recognized industrial hazards.
>
> Between 1909 and 1913, 36 Springfield individuals were killed by some kind of industrial accident.
>
> Thirty-five such accidents [nonfatal] were reported for the single year 1913. These, particularly with the six fatal accidents of that year, are sufficient to show a need for vigorous work in accident prevention.
>
> Up to the time of the survey no energetic accident-prevention campaign had ever been carried on in Springfield, either by employers' associations, labor organizations, civic bodies, the public officials, or the great majority of employers, although such campaigns have yielded excellent results elsewhere.
>
> The provisions of the statutes requiring the reporting of work accidents are confused and in some cases overlap.
>
> Protective legislation going into considerable detail, applying to accident prevention in mines, on steam railroads, to building and construction work, and

to factories, mercantile establishments, mills, and workshops, is found on the Illinois statute books. The work of the mine inspectors and railway safety inspectors, however, is not well organized, and is not carefully checked up and reported on from time to time—no reports at all being issued to show the efficiency of the work of the mining inspectors.

> Causes of occupational diseases are: Vitiation of air with irritating or poisonous dusts and fumes; direct contact of workers with irritating and poisonous substances; extremes of heat and cold; extremes of dryness and humidity; defects in lighting; abnormal atmospheric pressure; jarring, shaking, and deafening noise; and overstrain, fatigue, hurtful postures, and overexercise of parts of the body. A number of these conditions were found by the survey in greater or less degree in Springfield.
>
> Some efforts to eliminate possible sources of the start and spread of fires and to provide adequate fire-fighting facilities were observed in many Springfield factories, but this could not be said of all. In a number of establishments provision for adequate egress had not been sufficiently looked after.
>
> This law [workmen's compensation law] marked a distinct step forward, for it eliminated the "assumption of risk," "fellow servant," and "contributory negligence" defenses against the recovery of damages by injured workmen. But it has three great weaknesses which must be eliminated before the injured workman will get just treatment. First, it is optional with employers, and many, especially in the most hazardous industries, have elected to be exempt; second, injuries resulting from occupational disease are not covered; and third, even where operative, the law as administered does not in all cases eliminate the drain of lawyers' fees.

Under the Illinois child-labor law an age and school certificate must be secured by children under 16 years of age before they may go to work, and when employed they may not work before 7 a. m. or after 7 p. m.,[1] or for more than eight hours a day, or in any one of certain prohibited employments.

> From conditions found in Springfield, however, it would appear that neither the child-labor law of Illinois nor its enforcement is satisfactory. There are opportunities for fraud and evasion in the provisions governing the issuance of certificates to permit children under 16 years of age to go to work, while violation of the provisions limiting the hours of work of children under 16 seems to be the rule rather than the exception.

Thus, among 55 children selected at random, it was found that 40 (72.7 per cent) had been irregularly employed, that 4 (7.3 per cent) began work before 7 o'clock in the morning, that 21 (38.2 per cent) worked in the evening after 7 o'clock, and that 34 (61.8 per cent) exceeded the weekly limit of 48 hours. "In the employment of these 40 children there was a total of 89 separate violations of different sections of the law on hours of work." The report suggests that the present law should be amended, making it more difficult to evade the requirements regarding proof of age, requiring at least a sixth-grade education or its equivalent before a child under 16 may leave school to go to work, and requiring that evidence of normal development and sound physical condition be procured before a work certificate can be secured.

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[1] Those under 14 years of age may not work later than 6 p. m.

In the chapter on wages and regulation of employment considerable space is devoted to a consideration of conditions in the mining industry which at the time of the survey employed approximately 2,500 residents of the city for an average of 181 days in the year. Wages in 1913 ranged from $1.50 per day for trappers to approximately $1.27 per ton[1] for miners and loaders, who make up the great majority of mine workers. Because of the uncertainty of continuous employment some miners, it is stated, are compelled to seek other work during slack periods.

> The net result of these conditions is that miners' incomes, which when judged by wage rates appear to be liberal, are reduced until it is impossible in the case of many of the men to supply an average family of five or six persons with the reasonable necessities of life.

Among the measures recommended for improving wage conditions in the mines the report includes:

> Greater effectiveness in the work of public employment agencies; regularizing the industry through larger summer production; Government regulation which prevents the opening of new mines until there is commercial need for them; earlier negotiations toward agreements between the operators and the unions; and the appointment of a commission to take up the study of unemployment insurance.

Irregularity of employment was found in the manufacturing and mercantile industries. Out of 3,771 employees in 49 establishments about one-half had full-time employment in 1913. Wages varied from industry to industry, but the report notes that unskilled laborers received from $1.75 to $2 a day—a large proportion not over $1.80—and that the majority of skilled workers received wages ranging from $2 to $3.75 a day. Wage rates in the building trades, construction work, and in street paving were found to be fairly high, but the men suffered from enforced idleness. Transportation showed much greater regularity of work, with wages ranging from $12 to $30 a week. In laundries and mercantile establishments employing women mostly work was quite regular, but wages were low.

As to the wages of skilled and semiskilled workers in the manufacturing and mechanical industries, the building trades, and on railroads, the report expresses the opinion that one hope for male workers who at present are not members of the union is to be found in labor organization. As to wages of women workers, especially in laundries, 5-and-10-cent stores, and restaurants, it is stated that "minimum-wage legislation seems to offer the most promising method for securing a wage adequate for self-support of girls who give the whole of their working time to their employment." General wage increases may be brought about by certain indirect methods, to which end the report urges the support of citizens along the following lines:

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[1] It is stated that many workers were able to make as much as $5 a day when there is plenty of work, although a large proportion fall below that amount. Some of the miners interviewed reported daily earnings of $7 and $8. The 1916 scale provides an increase of 3 cents per ton over the 1914 rates for tonnage men, and 5 per cent increase in the wages of day laborers.

> The prohibition of child labor, with the consequent probable increase in the demand for, and in the wage of, adult labor; a corollary of this, the development of better industrial education for children now of school age, thus preparing the coming workers for better paid and higher types of work; the establishment of better wage rates for manual labor on public works; and the establishment of minimum wage standards.

The work and management of the Springfield State free employment office is reviewed, some apparent defects cited, and the need for some sort of central control of all State employment offices suggested.

The report shows that in 1914, in 72 manufacturing establishments, employing 3,981 organized and unorganized workers, 85 per cent were working nine or more hours a day, and that shorter hours, as a rule, prevailed in the union shops, where 54 per cent were working an eight-hour day.

> At the same time hours of labor, considered as a whole, were not what should be reasonably expected. The eight-hour day, toward which the leaders of the labor movement throughout the country are working, was still a good way from being achieved in Springfield. The great majority of all workers, both men and women, were laboring 6, 9, or 10 hours a day or more.
>
> There were a number of women and girls under 21 years of age still engaged in nightwork.
>
> Finally, many children were working for more than eight hours a day in spite of the law which makes such labor illegal.

It is recommended that the reduction of the workday for women to eight hours, the limitation of the weekly hours, the elimination of nightwork for women, and the guaranty of one day of rest in seven should be made a part of the State law and that better law enforcement is needed to effect a reduction in the hours of child workers.

From the study of 100 wage earners' families the following facts were developed:

> Seventy per cent of the 378 persons 14 years of age or over in these families were contributing to the family income.
>
> The proportion of wage-earning children was very large. Of the 57 between 14 and 16 years old, 41, or 72 per cent, were gainfully employed.
>
> When employed, 10 out of the 70 fathers whose wage rates were reported received less than $12 per week; 32 received from $12 to $20; 28 received $20 or more.

Of all the other males employed for whom information was available, one-third earned less than $7 a week, one-half less than $10. Among the women of 16 years of age and over, more than one-fourth earned less than $6, and almost 70 per cent less than $8 per week.

Of all members of these families who contributed to the family income, two out of every five reported irregular employment for the previous year—and irregular employment meant the loss of from several weeks to six months.

Of 56 persons discovered in the investigation who had left school before 16 years of age, 25, or nearly one-half, had left because their parents had not felt able to continue them in school.

Over one-fourth of the mothers in the 100 families were earning money to augment the family income.

Finally, conditions found in Springfield showed clearly, as they have in other investigations elsewhere, the important part which low wages and unemployment play in the problems of bad housing, child labor, evasion of the laws as to compulsory education, neglected childhood, and the predisposition of families to physical and often moral breakdowns. No solution of these problems, therefore, will be effective that does not eliminate the great economic waste of unemployment and correct the evil of low wages.

The report points out that the betterment of industrial conditions depends upon employers acting together in some degree but for the most part singly, employees acting individually and through labor organizations, and the public acting through crystallized public opinion and the power of the State. The largest responsibility is laid upon the employers who, it is stated, have large latitude in fixing wage rates, methods of payment, hours of labor, conditions as to safety and sanitation, and regularity of employment. In conclusion, the report briefly sums up the findings of the survey and offers definite recommendations to effectuate industrial betterment, laying particular emphasis upon the importance of consolidating and coordinating all State bodies having to do with industrial conditions into a single State department of labor with bureaus organized to have charge of special work.

These should include a bureau of inspection responsible for railroad, factory, and other inspection service, except mining; a bureau of child labor; of employment, including supervision of the public employment agencies; of mining; of research and labor statistics; and any other bureaus that may later be needed. The plan of reorganization should provide for the establishment of an industrial commission as an integral part of the new labor department, with the commission, instead of a single commissioner, acting as the executive head of the department.

The administration of the workmen's compensation act should be made a function of the industrial commission of the reorganized labor department.

It is believed * * * as in the case of workmen's compensation laws, that health insurance legislation will act as a powerful force for prevention of disease. * * * It is recommended, therefore, * * * that a commission of the legislature be appointed to study and report upon the matter.

Under the reorganization plan recommended the enforcement of the child-labor law should be in the hands of a bureau of child labor in the new department of labor and mining.

The establishment of a minimum-wage board through which assurance may be had that wages at least adequate for the self-support of girls giving the whole of their working time to stores or other work places is recommended.

It is recommended that thorough study of the unemployment situation and unemployment insurance be taken up through a commission to be created by the legislature.

The courts of New York State have held a law prohibiting the 7-day work week in factories and mercantile establishments to be constitutional. A similar law is recommended for Illinois.

The law allowing women to work 10 hours a day 7 days per week should be changed to make it illegal to employ women at most for more than 8 hours per day or 48 hours per week. This would merely be eliminating the 7-day week and reducing hours on the other 6 days to 8. Moreover, the law should be amended to prohibit nightwork by women and girls.

THE ORGANIC DEVELOPMENT OF BUSINESS.[1]

This is the subtitle of the report of the committee on vocational guidance submitted at the fourth annual convention of the National Association of Corporation Schools held at Pittsburgh, May 30 to June 2, 1916. As stated in the report of the committee for 1915, "vocational guidance in industry is the organic conception of the individual in industry, and is possible only through organic progress in industry; hence the subtitle of the report." The present report is "an attempt to set forth what employee, employer, and society should strive for in the human relations in industry—the realization of an organic unity in each individual life, in each business, between businesses, and between business and society." It appears to be concerned primarily with the problem of "suggesting machinery for getting the organic conception of the individual in industry to operate efficiently in each firm of the association."

In order to grasp the significance of the organic unity of man, certain normal human needs are emphasized, among which are physical integrity, adequate compensation, training and knowledge, appreciation of the beautiful, social opportunities, and justice. Health is absolutely the foundation of economic and social efficiency, declares the report in drawing attention to the necessity of physical examination of employees, the protection of all workers after they are in their positions, the prevention of accidents, and the control and elimination of occupational diseases. In order to give concreteness to the organic progress of the employee in industry, the report gives in synthetic outline a picture of the worker at his job from start to finish, having an adequate starting knowledge of his prospective employer, fairly selected for his job, instructed in his work, guaranteed bodily integrity, given a chance to learn the business, justly remunerated, working reasonable hours, surrounded by machinery designed to keep open channels, assured that merit will win, and freely and fearlessly taking part in all those activities that awaken, train, and develop personal power.

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[1] National Association of Corporation Schools. Report of Committee on Vocational Guidance (The Organic Development of Business). Fourth annual convention, Pittsburgh. May 30, 31, and June 1, 2, 1916. New York, 1916. 148 pp.

Representatives of the committee on vocational guidance made a tour of investigation, visiting a number of individual firms in New York, Cleveland, Detroit, Chicago, Pittsburgh, and Philadelphia, and this personal contact with more than 200 executives of all grades revealed a "keen interest in the significance of the human relations in industry and a deep appreciation of it," and also that "the organic conception of the employee must include work, income, food, home, sleep, training, protection, recreation—the total life of an efficient contented human being—in work and out of work." This personal investigation also revealed a clear tendency among the firms visited "to get away from the old type autocratic one-man rule and substitute therefore the functionalized and cooperative committee system." Furthermore, many firms expressed a desire to have an efficient clearing house established in the association that would effectively gather, evaluate and pass along helpful assistance in the understanding and solution of their problems. In laying emphasis upon the general considerations resulting from this personal investigation—the rapidly growing interest in the human relations in work; the grasping in business of the organic ideal; the open, friendly, give-and-take spirit; the definite, helpful cooperative arrangements with our educational institutions; the rapidly developing, scientific, and human spirit in business, evidenced through the demand for the expert and the deep interest in experiments in industrial cooperative control; the searching efforts to anticipate and prepare for the readjustments certain to follow the war—"we see clearly that business is being recognized as the all correlating life fact of our time, in which the sovereignty of the normal individual must be realized."

Part II of the report is devoted to the formulation of ways and means for putting the organic conception of the individual employee in industry into practical operation—to make it of real working value. The general subjects discussed in this connection relate to a central employment and service bureau, the selection and adjustment of men to jobs, health, education, promotion and transfer, grievances, and management sharing.

Decentralization in dealing with questions of employment is regarded as the fundamental weakness in the whole employment problem. Through a well thought-out centralized employment and service bureau should function all fundamental problems having to do with job analysis and the educational value of the job, and with the selection, hiring, compensation, promotion, and discharge of workmen. The importance of job analysis which includes a careful study of every kind of occupation, both within the industry itself and in relation to the life of the employee outside of his occupation, is emphasized. The medical examination of employees is regarded as the basis for all accurate work along the line of health conservation. The education and training of employees within the industry "is one of the most significant movements in the world of industry and gives promise of rapid extensive and intensive development. The training of employees is 'good business.' This conviction is turning our large corporate industries into veritable schools, colleges, and universities. It is already having a wholesome retroactive influence on our formal educational procedure in schools and colleges, giving it a more concrete content and shaping up educational methods more in terms of vocational business and social values." The report discusses some prerequisites of corporation education, pointing out the necessity of making physical, mental, and vocational tests in order to get "the right man on the right job." The value of systematic promotion and the advantages of a policy of transferring men from one job or department to another—remedying misfits—are briefly mentioned. Taking up the matter of grievances, the report declares that "a wise handling of misunderstandings, dissatisfactions and grievances is one of the most important problems now receiving wide attention." The report concludes with a brief description of how some firms are encouraging the cooperation of their employees in the management of the business—that is, making the workers practically partners in management.

Part III of the report includes special articles on the general subjects of Selection, Employment department, Home conditions, Training courses, and Adjustment machinery.

CHOICE OF OCCUPATION OF CHILDREN LEAVING SCHOOL IN THE CANTON OF ZURICH, SWITZERLAND.

In a recently issued bulletin[1] of the statistical bureau of the Swiss Canton of Zurich are published interesting statistics as to the choice of the occupation of pupils leaving the cantonal primary and secondary schools in 1915. It may be noted that in the primary schools the school age varies from 6 to 16 years. The secondary school supplements the work of the primary schools for those children who desire to increase their knowledge though having no idea of going on to higher studies, and also prepares certain pupils for entrance into the middle schools. Attendance is compulsory in the primary school but generally voluntary in the secondary schools.

The course of studies in the secondary school covers from two to four years and pupils are admitted from ten years and upward. In the Canton of Zurich, the primary schools have eight grades and the secondary schools three grades. Attendance is compulsory for eight years.

The total number of pupils leaving the primary and secondary schools in Zurich in the spring of 1915 was 7,972, against 8,077 in 1914. The decrease is partly explained by the fact that at the outbreak of the war a large number of alien children who had been living in the Canton returned with their parents to their native country. It is interesting to note that the pupils leaving school in 1915 had on an average a higher education than those leaving in 1914. In 1914, 51 per cent of the pupils leaving had attended the primary schools and 49 per cent the secondary schools, while in 1915 this proportion was exactly reversed.

The statements of those who were able to report that they had made a choice of occupation before leaving school are summarized in the following table:

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[1] Die Berufswahl der im Frühjahr 1915 aus der Volksschule ausgetretenen Schüler. Winterthur, 1916. 58 pp. (Statistische Mitteilungen betreffend den Kanton Zürich. Heft 122. Herausgegeben vom Kantonalen Statistischen Bureau.)

GENERAL STATEMENT OF CHOICE OF OCCUPATION MADE BY PUPILS LEAVING SCHOOL IN 1915.

Choice of occupation.	Pupils of primary schools.		Pupils of secondary schools.		Total.		
					1915		1914
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Per cent.
MALE.							
Entrance into a higher educational institution.	14	0.9	418	21.9	432	12.5	10.4
Departure for the purpose of an education in foreign languages	5	.3	59	3.1	64	1.9	2.5
Entrance into the business or industrial establishment of parents	379	24.7	257	13.4	636	18.4	19.7
Apprenticeship	700	45.5	1,067	55.8	1,767	51.2	49.6
Unskilled labor	440	28.6	111	5.8	551	16.0	17.8
Total	1,538	100.0	1,912	100.0	3,450	100.0	100.0
FEMALE.							
Entrance into a higher educational institution.	6	0.3	371	22.1	377	10.5	7.4
Departure for the purpose of education in foreign languages	7	.4	67	4.0	74	2.1	6.6
Entrance into the business or industrial establishment of parents	55	2.9	79	4.7	134	3.8	3.6
Apprenticeship	378	19.9	432	25.7	810	22.7	23.9
Industrial unskilled labor	495	26.1	100	6.0	595	16.6	19.7
Domestic occupation in:							
Own family—							
Agricultural	306	16.1	171	10.2	477	13.3	13.3
Nonagricultural	340	17.9	330	19.7	670	18.7	17.1
With strangers	311	16.4	127	7.6	438	12.3	8.4
Total	1,898	100.0	1,677	100.0	3,575	100.0	100.0

The decrease shown in the number of pupils who entered gainful employment without any previous apprenticeship the report ascribes to the economic crisis caused by the war. This decrease, the report notes, indicates that in times of economic depression unskilled labor is less in demand than skilled labor.

A close study of the data presented shows in how large a measure the future of children entering gainful occupations is dependent upon their schooling. In the case of the boys leaving school, it becomes evident that those entering into the business of their parents, as well as those choosing unskilled labor in the service of strangers, were largely primary-school pupils, while about three-fifths of those choosing apprenticeship in a skilled occupation were pupils of the secondary schools (1,067 out of 1,767). A majority of the girls who are being apprenticed are likewise from the secondary schools, while more than four-fifths of those choosing unskilled labor have merely a primary-school education (1,452 out of 21,807).

Below are shown the principal industrial and occupational groups from among which the pupils of both sexes chose their future occupation.

CHOICE OF OCCUPATION OF PUPILS LEAVING SCHOOL, BY SEX, INDUSTRIAL AND OCCUPATIONAL GROUPS, AND IN WHAT CAPACITY, 1914 AND 1915.

Industrial and occupational groups.	Pupils entering—							
	The business of their parents.		Apprenticeship.		Unskilled labor.		Total.	
	1914	1915	1914	1915	1914	1915	1914	1915
MALE.								
Agriculture, gardening, etc	508	475	41	70	129	173	678	718
Industries and trades:								
Foodstuffs, etc., industry	34	28	101	98	15	11	150	137
Clothing industry	19	16	54	68	18	15	91	99
Building trades	41	44	208	116	29	18	278	178
Textile industry	4	....	20	35	161	125	185	160
Metal industry	27	33	726	857	76	80	829	970
Printing trades	6	4	72	50	1	2	79	65
Other industries and trades	15	10	52	53	39	13	106	76
Total	146	135	1,233	1,286	339	264	1,718	1,685
Technical occupations in industry	....	....	99	104	....	....	99	104
Mercantile occupations in industry and commerce	11	13	279	257	....	....	290	270
Labor in mercantile establishments	11	9	5	1	144	104	160	114
Hotels, restaurants, saloons, cafés, etc	6	2	34	23	6	5	46	30
Transportation	7	2	25	8	7	5	39	15
Public administration, professions	3	....	28	18	....	....	31	18
Grand total	692	636	1,744	1,767	625	551	3,061	2,954
FEMALE.								
Agriculture, gardening, etc	499	491	2	1	....	....	501	492
Industries and trades:								
Foodstuffs, etc., industry	35	32	....	....	22	21	57	53
Clothing and millinery industry	21	14	631	576	42	38	694	628
Textile industry	5	3	13	14	508	453	526	470
Metal industry	....	....	....	....	9	9	9	9
Printing trades	2	2	1	1	11	4	14	7
Other industries and trades	5	1	8	7	19	25	32	33
Total	68	52	653	598	611	550	1,332	1,200
Technical occupations in industry	1	....	....	....	....	....	1	....
Mercantile occupations in industry and commerce	3	19	197	186	....	....	200	205
Labor in mercantile establishments	32	24	....	....	112	36	144	60
Hotels, restaurants, saloons, cafés, etc	25	25	15	8	5	9	45	42
Transportation	....	....	7	4	1	....	8	4
Public administration, professions	....	....	10	10	1	....	11	10
Nursing	....	....	3	3	1	....	4	3
Domestic service, housekeeping	637	670	....	....	315	438	952	1,108
Grand total	1,265	1,281	887	810	1,046	1,033	3,198	3,124

IMMIGRATION IN JULY, 1916.

The number of immigrant aliens admitted into the United States during the first eight months of 1916 has been in excess of the number admitted during the corresponding months of 1915. There has also been an increase from month to month during the first five months of 1916. June shows a decrease of 0.8 per cent from May, July a decrease of 18.6 per cent from June, and August an increase of 19.7 per cent over July. These facts are brought out in the statement following.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1914, 1915, AND 1916.

Month.	1914	1915	1916	Per cent of increase over preceding month.
January	44,708	15,481	17,293	8.5
February	46,873	13,873	24,740	43.1
March	92,621	19,263	27,586	11.5
April	119,885	24,532	30,560	10.8
May	107,796	26,069	31,021	15.1
June	71,728	22,598	30,764	[1].8
July	60,377	21,504	25,035	[1] 18.6
August	37,706	21,949	29,975	19.7

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during July, 1915 and 1916, was as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, JULY, 1915 AND 1916.

Race.	Admitted.		Departing.	
	July, 1915.	July, 1916.	July, 1915.	July, 1916.
African (black)	486	797	210	140
Armenian	30	118	58	15
Bohemian and Moravian	54	15	4	....
Bulgarian, Serbian, Montenegrin	419	160	50	6
Chinese	357	180	157	50
Croatian and Slavonian	54	33	4	....
Cuban	454	719	109	232
Dalmatian, Bosnian, Herzegovinian	12	3	1	....
Dutch and Flemish	548	322	39	76
East Indian	11	2	4	3
English	2,787	3,119	578	617
Finnish	341	631	48	45
French	834	1,526	48	325
German	798	783	30	55
Greek	2,314	1,692	185	188
Hebrew	1,357	1,031	12	12
Irish	1,530	1,618	141	186
Italian (north)	423	340	457	212
Italian (south)	1,913	3,004	4,649	489
Japanese	903	686	69	50
Korean	11	5	6	7
Lithuanian	35	37	4	....
Magyar	64	17	6	12
Mexican	1,121	1,132	26	101
Pacific Islander	2	3	....	4
Polish	350	283	76	9
Portuguese	758	1,118	70	53
Roumanian	41	49	5	2
Russian	330	413	606	522
Ruthenian (Russniak)	160	109	....	1
Scandinavian	1,027	1,706	229	387
Scotch	937	1,081	168	184
Slovak	42	12	6	3
Spanish	420	1,467	179	202
Spanish-American	143	211	42	46
Syrian	40	93	22	6
Turkish	20	39	1	....
Welsh	96	73	7	8
West Indian (except Cuban)	84	205	44	20
Other peoples	196	203	30	54
Not specified	....	....	1,481	1,107
Total	21,504	25,035	9,861	5,429

OFFICIAL PUBLICATIONS RELATING TO LABOR.

UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. Report of decisions for the year 1915. Vol. 2. [Sacramento] 1916. 1121 pp.*

Contains report of decisions under the employers' liability act, commonly known as the Roseberry Act, an elective measure applying only to those filing notice of their intention to come under its provisions, and under the workmen's compensation insurance and safety act, as amended, effective January 1, 1914, which superseded the Roseberry Act. This act is a compulsory compensation measure and includes all classes of labor with the exception of farm, dairy, agricultural, viticultural or horticultural labor, stock or poultry raising, household domestic service, and employments which are both casual and not in the usual course of the business of the employer. This act was amended by the legislature in 1915 to cover occupational diseases. The volume contains about 1,000 decisions, of which 7 are under the Roseberry Act. The dismissed cases number 110. There are included also 8 decisions of the Supreme Court and District Court of Appeals of California on review of decisions made by the commission.

GEORGIA.—*Department of Commerce and Labor. Fourth annual report of the Commissioner of Commerce and Labor for the fiscal year ending December 31, 1915. Atlanta, 1916. 85 pp.*

Embraces a résumé of approximately 100 years of industrial progress in the State; an article on the natural resources of the State; statistics showing the amount and value of the raw material used during 1915 by the manufacturers of the State; the number of employees; the amount of wages paid to wage earners; the value of manufactured articles; and other information. The 166 textile mills, with a combined capital of $48,849,232.73, turned out product valued at $70,241,926.81. They employed 15,242 females and 22,063 males, 2,336, or 15.3 per cent, of the former being under 16 years of age. The highest weekly wage paid to women workers was $18 and the lowest was $2; the highest paid to male workers was $32 and the lowest $2.

MASSACHUSETTS.—*Bureau of Statistics. Rates of wages and hours of labor in steam and electric railway service in Massachusetts. June 1, 1916. Boston, 1916. 60 pp. (Labor bulletin, No. 115, being Part III of the annual report on the statistics of labor for 1916.)*

This is a special report on the rates of wages and hours of labor in the entire railway service in Massachusetts. It supplements previous annual reports on union scale of wages and hours of labor by including information previously omitted, having reference to those occupations represented in construction, maintenance, and repair work, while prior reports pertained to the operation of rolling stock. Data for the report were secured from printed and typewritten "Rules" or schedules furnished by the officials of the steam railroad and electric railway companies, and of the several labor organizations concerned.

The data for steam railroads are of date May 15, 1916, and for street railways of date October 1, 1915.

MICHIGAN.—*Department of Labor. Thirty-third annual report [1915]. Lansing, 1916. 741 pp.*

This report gives detailed statistics of inspections of factories and workshops, stores, buildings, restaurants, hotels, and schoolhouses, with supplementary reports of the State boat inspector and the coal-mine inspector. There are also presented prison and reformatory statistics, a summary of accidents reported, a list of orders issued suggesting compliance with the provisions of law, statistics of the Michigan free employment bureaus, a list of banks in the State, a compilation of labor laws, and reports of municipalities.

During the year 1915 there were 14,359 inspections of factories and workshops, in which were employed 452,105 persons at the time of securing the statistics, 65,708 (14.5 per cent) being females and 386,397 (85.5 per cent) being males, with an aggregate daily pay roll of $1,116,428.80. There were 1,226 males employed under 16 years of age. The average daily hours of labor for males was 9.4 and for females 8.6. About half of the firms inspected, 7,250, or 50.5 per cent, carried workmen's compensation insurance. There were 2,834 inspections of stores employing 28,074[1] people at an average daily wage of $2.12; 529 restaurants employing 4,599[1] persons at an average daily wage of $1.31; 986 hotels employing 11,387[1] persons at an average daily wage of $1.16.

The six free employment offices in the State sent 54,000 persons to employers desiring help, an increase of 15,342 over 1914.

In 15 coal mines operated in 4 counties, 239 accidents occurred, of which 5 were fatal.

In all, 7,110 accidents, 75 being fatal, were reported to the department. Of these, 2,775 (39 per cent) occurred in connection with automobiles and automobile accessories. Approximately 75 per cent were due to causes other than machinery. In 2,425 cases (34.1 per cent) the disability did not extend beyond one-half day. A comparison of these figures with the number of accidents reported to the Michigan Industrial Accident Board (in 1915 a total of 39,781, of which 332 were fatal[2]) shows that they are far from complete and omit many fatal as well as nonfatal accidents.

New Jersey.—*Department of Labor. Thirty-eighth annual report of the Bureau of Industrial Statistics for the year ending October 31, 1915. Camden, 1916. 296 pp.*

Presents comparative statistics of manufacturers for the calendar years 1913 and 1914; a tabular and analytic review of employment, working time, wages, accidents, etc., on steam railroads; a review of retail prices of food supplies; statistics of the fruit and vegetable canning industry; and a year's record of occurrences of interest to labor and industry, grouped under the title Industrial Chronology of New Jersey, as follows: Accidents to workmen while on duty; suspension of work—temporary or permanent—in manufacturing establishments; changes in working hours and wages; expansion of manufacturing industry; industrial property damaged or destroyed by fire; organization of trade and labor unions; and such strikes as have occurred during the 12 months covered by the chronological record.

The number of manufacturing establishments on December 31, 1914, was 2,624, divided into 89 general groups, with total capital of $1,025,169,694. The aggregate average number of wage earners employed was 325,634. Of these, 233,208 were males 16 years of age and over, 87,669 were females 16 years of age and over, and 4,757 were children of both sexes who were less than 16 years. The total amount paid in wages was $183,530,980, or $563.61 per employee.

On railroads, for the year ending June 30, 1914, 44,898 persons were employed, to whom $35,586,727.36 were paid in wages—an average daily wage of $2.82. The employees injured numbered 2,490; 53 injuries resulted fatally.

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[1] All the employees did not receive wages, and the average is based upon the number to whom wages were paid.

[2] See Monthly Review of the United States Bureau of Labor Statistics, April, 1916, p. 61.

For the year ending September 30, 1914, the report notes 3,795 accidents, of which 259 (6.8 per cent) were fatal and 3,536 (93.2 per cent) nonfatal. Approximately one-third (65.6 per cent) of the accidents were reported by the railroads. One hundred and twenty-seven strikes and lockouts are reported, involving 26,786 wage earners and an aggregate wage loss of $598,989, or $22.40 for every participator. The aggregate number of days lost was 288,309, an average of 10.7 for each wage earner concerned. A detailed history of the strike of the Standard Oil Co. employees at Bayonne and the strike of the workers at the American Agricultural Chemical Co. at Roosevelt is given.

WYOMING.—*State Coal Mine Inspector. Annual report, year ending September 30, 1915. Cheyenne [1916]. 40 pp.*

This report shows a total coal production for the year ending September 30, 1915, of 6,268,990 tons; total employees, 7,379; fatal accidents, 21; nonfatal accidents, 144; tons of coal produced per accident, 37,994; number of fatal accidents per 1,000 employees, 2.85. It emphasizes the importance of safety in mines.

UNITED STATES.—*Congress. House. Committee on Labor. National employment bureau. Report to accompany H. R. 5783. [Washington, 1916.] 12 pp. (64th Cong., 1st sess., H. Rept. No. 424.)*

At the hearings held by the committee on H. R. 5783 statements were made by the Secretary of Labor; the Commissioner of Labor Statistics; Hon. J. I. Nolan, Congressman from California; Dr. B. A. Sekely, representing the National Liberal Immigration League; and Mr. D. B. Wheeler, of Washington, D. C., all agreeing on the necessity of immediate legislation to take care of the problem of unemployment. No one appeared in opposition to the legislation. This report is largely devoted to the statement of the Secretary of Labor, Hon. W. B. Wilson. In conclusion, the report says:

> H. R. 5783, introduced by Mr. Nolan, contains a comprehensive plan for the establishment of such a bureau and embodies the proposition to use the post offices, postal facilities, and postal employees under the direction of a bureau of employment established in the Department of Labor. This idea has met with the approval of the committee and practically all students of the question, since it offers the opportunity of using for the solution of this problem well-established departments of the Government already organized. Moreover, it recommends itself for the reason that the expense entailed will thus be comparatively small. Also, as the post office is already the center of the social life in every community and the inhabitants habitually visit these offices, the system can at once be put into operation and those in most need of service of this kind be immediately acquainted with its opportunities through channels with which they are familiar and in the habit of using daily. The facilities for free and easy intercommunication possessed by the Post Office Department will also aid greatly in making the system efficient. * * *
>
> The necessity for legislation of this character is denied by no one; and, indeed, the increasing menace of the situation in regard to unemployment at certain seasons of the year is so apparent that all students of the question agree that some remedy must be found. * * *
>
> The committee is convinced that it is in the power of Congress, by immediate action (which should be taken before another season of unemployment is upon us), to alleviate to a large extent the appalling situation that periodically confronts the country by reason of unemployment and earnestly urges the immediate attention of Congress thereto.

—— —— *Senate. The Seaman's Act of 1915. Address delivered at the ninth annual meeting of the American Association for Labor Legislation, held in Washington, D. C., on December 28, 1915, by Henry W. Farnam. Washington, 1916. 16 pp. (64th Cong., 1st sess., S. Doc. No. 333.)*

UNITED STATES.—*Congress. Senate. The Federal Farm Loan Act, approved July 17, 1916, with marginal notes and index. S. Doc. 500, 64th Congress, 1st sess. Washington, 1916. 50 pp.*

This is an act to provide capital for agricultural development, to create a standard form of investment based upon farm mortgage, to equalize rates of interest upon farm loans, to furnish a market for United States bonds, to create Government depositaries and financial agents for the United States, and for other purposes.

—— *Department of Commerce. Bureau of the Census. Financial statistics of cities having a population of over 30,000. 1915. Washington, 1916. 338 pp.*

Contains 34 tables and 27 diagrams as a part of the text and 32 general tables setting forth financial statistics of 204 cities having a population of over 30,000 in 1915, the total population represented by these cities being 31,168,150, or 31 per cent of the population of the entire country. Massachusetts has the largest number of cities in this class, namely, 19. These cities show total receipts of $271,505,178 which, added to the cash balance at the beginning of the year, made a total of $2,381,103,700. The payments for governmental and nongovernmental purposes were $2,118,134,530, leaving a cash balance at the close of the year of $262,969,170.

—— *Department of the Interior. Bureau of Education. Vocational guidance bibliography. June 7, 1916. [Washington, 1916] 31 pp.*

—— *Public Health Service. Health insurance: Report of standing committee adopted by the conference of State and Territorial health authorities with the United States Public Health Service, Washington, D. C., May 13, 1916. Washington, 1916. 8 pp. (Reprint No. 352 from the Public Health Reports, July 21, 1916, pp. 1919-1925.)*

The committee, consisting of William C. Woodward, M. D., health officer of the District of Columbia, and B. S. Warren, surgeon, United States Health Service, recommends the following fundamental provisions in any health-insurance measure proposed for National or State Governments:

1. *Insured persons.*—Every person engaged in a gainful occupation and earning less than a specified annual income, say $1,000, should be entitled to the benefits provided under the law. Every person earning more than the specified annual income should be allowed to qualify for the same benefits or greater benefits according to annual income.

2. *Funds.*—To be provided jointly by contributions from employees and employers; the Government to appropriate for the expenses of supervision and administration.[1]

3. *Benefits.*—The following benefits should be provided:

(*a*) *Cash benefits.*—Weekly cash payments in case of disability due to sickness, nonindustrial accident, or to childbearing by the beneficiary, for a period not to exceed 26 weeks in any one 12-month period.

(*b*) *Death benefits.*—Cash payment (for funeral expenses) to legal heirs for death due to sickness or nonindustrial accident.

(*c*) *Medical benefits.*—To include adequate medical and surgical care, medicines and appliances in home, hospital, sanatorium, dispensary, or physician's office, beginning with the first day of disability, whether due to sickness, nonindustrial accident, or to childbearing by the beneficiary or the wife of the beneficiary, and limited to a period of 26 weeks in one 12-month period.

4. *Administration.*—All matters of promulgation of rules and regulations and appeals should be vested in a National or State commission created for this purpose. All matters of local administration should be vested in local boards of directors, federated according to districts, subject to supervision by the central authorities, and rules and regulations promulgated by the commission.

The commission and all local and federated boards should be composed of persons representing the contributors to the funds. The number representing employees and employers should be in the same ratio as their respective contributions.

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[1] Compare proposal of American Association for Labor Legislation, p. 65 of this issue of the REVIEW.

Provision should be made for free choice of any physician registered on the local panel, and provision might be made also for adequate institutional care for those who prefer this method of medical benefits.

A corps of full-time medical officers should be provided within the National or State health service to have supervision of all hospital and dispensary relief; to examine all insured persons claiming to be disabled, and issue certificates in accordance with the regulations promulgated by the commission; to advise the administrative authorities and all contributors to the funds as to the best measures for the relief and prevention of sickness; to advise with the physicians attending sick members as to measures which will shorten the periods of disability; and to perform such other duties as may be fixed by regulations.

FOREIGN COUNTRIES.

ARGENTINA.—*Boletín del Departamento Nacional del Trabajo. Buenos Aires. May, 1916 (No. 34).*

Continues from the preceding number the report of an investigation or study by the Department of Labor on labor conditions in the Federal District and in Chaco and Formosa.

AUSTRALIA.—*Commonwealth Bureau of Census and Statistics. Labor and Industrial Branch. Report No. 6. Prices, purchasing power of money, wages, trade-unions, unemployment, and general industrial conditions, 1914–15. May, 1916. Melbourne [1916]. 183 pp.*

The scope of this report is indicated in the title. The number of trade-unions in the Commonwealth increased from 302 with a membership of 147,049 in 1906, to 713 with a total membership of 528,031 in 1915. The largest membership, not including the miscellaneous group, was in the railway and tramway services. Compared with 1911, the base year, the weighted average purchasing power of money index number shows an increase of 14 per cent for 1914 and of 27.8 per cent for 1915. The weighted average normal weekly rate of wages as expressed by index numbers, for adult male workers on December 31, 1915, the wage payable on April 30, 1914, being taken as the base—1,000—was 1,023, and for female workers, 1,006. The weighted average working hours per week on December 31, 1915, were 48.77 for male workers and 49.12 for female workers, as compared with 48.93 and 49.08, respectively, on April 30, 1914. Operations under the arbitration and wages board acts show a total of 208 awards or determinations made and 130 agreements filed in 1914, and 274 awards and 243 agreements in 1915. The report notes, during 1915, 358 industrial disputes involving 81,292 workers with a total loss in days of 583,225 and a wage loss of £299,633 ($1,458,163.99). (See p. 68.) In 1915, 111,339 applications for employment were filed with the State free employment bureaus, and 39,089 positions were filled. In the same year 5,027 industrial accidents occurred; 144 were fatal and 4,883 incapacitated for more than 14 days. More than 80 per cent of the accidents occurred in the mining industry.

—— —— *Labor Bulletin (published quarterly). Melbourne. July, 1916 (No. 13, January-March, 1916).*

Contains the usual current material on labor conditions, unemployment, retail and wholesale prices, house rents, industrial disputes, rates of wages, operations under the arbitration and wages board acts, emigration, employment bureaus, industrial accidents and labor legislation.

—— —— *Official year book of the Commonwealth of Australia, containing authoritative statistics for the period 1901 to 1914 and corrected statistics for the period 1788 to 1900. Number 8, 1915. Melbourne, [1916]. 1127 [1] pp.*

In addition to the statistical material in this volume concerning political, social, and economic conditions in Australia, the year book contains special articles dealing with subjects of particular interest to labor and contained in those sections referring to industrial unionism and labor and industrial statistics. Considerable use is made of maps and diagrams.

AUSTRIA.—*Amtliche Nachrichten des k. k. Ministeriums des Innern, betreffend die Unfall- und Krankenversicherung der Arbeiter. Vienna, June, 1916.*

Special articles and current reports on matters relating to the social-insurance system of Austria; a special supplement reports financial and sickness statistics of the workmen's sick funds for the years 1912 and 1913.

——*Arbeitsstatistisches Amt im Handelsministerium. Die Arbeitseinstellungen und Aussperrungen in Öesterrich während des Jahres 1914. Vienna, 1916. 95, 76 pp.*

A report of the Austrian bureau of labor statistics on strikes and lockouts during 1914. An appendix gives statistics of employers' and workmen's organizations. The strike and lockout statistics are reviewed on pages 70 and 71 of the present number of the REVIEW.

———— *Die kollektiven arbeits- und Lohnverträge in Österreich. Abschlüsse und Erneuerungen des Jahres 1913. ' Vienna, 1916. 178 pp.*

The present report on collective agreements entered into in Austria during 1913 continues a series begun in 1906 by the Austrian bureau of labor statistics. During the year 1913, 500 collective agreements, covering 10,986 establishments and affecting 142,682 workmen, were concluded. The number of newly concluded agreements decreased 23 per cent as compared with the average number for the seven preceding years, while the number of establishments covered corresponds to the average for these seven years, and the number of workmen affected decreased by about 4 per cent. Of the total agreements concluded during the year, 45 per cent were new agreements and 55 per cent were renewals. Classified as local and shop agreements, 170 agreements, affecting 119,234 workmen, were local or group agreements, while 330, affecting 23,448 workmen, were shop agreements. The data concerning the duration of the agreements concluded in 1913 have been summarized in the table following:

CLASSIFIED DURATION OF COLLECTIVE AGREEMENTS CONCLUDED IN AUSTRIA IN 1913.

Duration.[1]	Agreements.		Establishments covered.		Workmen covered.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Less than one year	8	1.77	15	0.18	293	0.22
One year but less than two years	69	15.27	305	3.56	3,969	3.01
Two years but less than three years	171	37.83	3,617	42.21	54,621	41.44
Three years but less than four years	130	28.76	2,676	31.23	51,309	38.93
Four years but less than five years	60	13.27	1,828	21.33	20,213	15.34
Five years and over	14	3.10	128	1.49	1,400	1.06
Total	452	100.00	8,569	100.00	131,805	100.00

[1] In 48 agreements, covering 2,417 establishments and 10,877 workmen, the duration was indeterminate.

The following table shows the total number of collective agreements in force, with the number of establishments included and number of employees affected, on December 31, 1913, by industries. The data given in this table are somewhat defective, because many agreements are broken or terminated by notice before their actual expiration without this fact being reported to the bureau, and partly because agreements of indeterminate duration are not included in the compilation, as no information could be obtained as to whether or not these agreements were still in force.

COLLECTIVE AGREEMENTS CLASSIFIED BY INDUSTRIES IN FORCE IN AUSTRIA DEC. 31, 1913.

Industry and occupational groups.	Number of agreements.	Number of establishments covered.	Number of workmen covered.
Agriculture and gardening	1	1	87
Mining	2	41	39,200
Stone, earthenware, glass, and china	152	799	21,239
Metal working and machinery	397	2,873	78,004
Woodworking industry	179	2,925	24,178
Leather industry	45	233	3,696
Textile industry	27	64	5,349
Upholstering	18	364	1,415
Clothing	164	15,788	54,808
Paper	35	1,133	10,266
Foodstuffs	194	3,163	30,857
Hotels, restaurants, cafés, etc	10	1,946	5,717
Chemical industry	20	20	2,025
Building trades	225	5,640	99,451
Printing trades	24	1,881	23,907
Commerce, transportation	85	2,625	18,590
Engineers and firemen	10	10	201
Other occupations	13	13	382
Total	1,601	39,519	419,372

The principal provisions in agreements entered into in 1913 relate to wages (97 per cent of all agreements) and to the hours of labor (87 per cent). The principal facts in regard to hours of labor, as reflected in these collective agreements, are disclosed in the table following:

NUMBER AND PER CENT OF AGREEMENTS, ESTABLISHMENTS COVERED, AND WORKMEN AFFECTED, CLASSIFIED ACCORDING TO NORMAL HOURS OF LABOR ON THE FIRST FIVE DAYS OF THE WEEK.

Normal hours of labor on the first 5 days of the week.	Agreements.		Establishments covered.		Workmen covered.		Earlier closing on Saturdays.[1]		
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Agreements.	Establishments covered.	Workmen covered.
8	7	1.7	156	2.0	406	0.3	....	....	....
8½	2	.5	201	2.5	1,414	1.1	2	201	1,414
8¾	7	1.7	116	1.5	795	.6	2	101	514
9	103	25.1	3,978	49.6	58,405	45.2	75	3,108	47,473
9¼	19	4.6	176	2.2	1,993	1.6	18	141	1,593
9½	103	25.1	959	12.0	25,218	19.5	95	921	24,415
9¾	27	6.6	705	8.8	19,084	14.8	25	703	19,030
10	108	26.3	675	8.4	17,617	13.6	73	877	14,234
10½	18	4.4	773	9.6	2,308	1.8	5	651	1,329
10¾	2	.5	76	.9	165	.1	1	75	150
11	12	2.9	100	1.2	470	.4	5	55	220
11½	1	.3	(2)	....	(2)	....	....	....	....
12	1	.3	105	1.3	1,305	1.0	....	....	....
Total	410	100.0	8,020	100.0	129,180	100.0	301	6,333	110,372

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[1] Of the agreements shown here, 25, covering 717 establishments and 19,473 workmen, in addition to earlier closing on Saturday also provide for earlier closing on other week days. Fourteen establishments which, without regulating the daily hours of labor, provide for earlier closing on Saturday are not included here.

[2] The establishments and workmen covered were enumerated under agreements providing for 12 hours of labor.

Brazil (**São Paulo**).—*Boletim do Departamento Estadual do Trabalho. São Paulo. First quarter, 1916 (vol. 5, No. 18).*

Industrial accidents in 1915, the labor market in 1915, and labor legislation.

Denmark.—*Statens Statistiske Departement. Statistiske meddelelser. 4. række, 51. bind. Copenhagen, 1916. 3 parts in 1 volume.*

Constitutes volume 51 of the fourth series of the general statistics of Denmark, and contains the results of the population census of Denmark of February 1, 1916, wages of agricultural laborers in 1915, and statistics of production of products subject to State regulation, namely, alcohol, beer, sugar, oleomargarine, and cigarettes.

In the inquiry covering wages of agricultural laborers there were included 6,700 workers. The average annual wages of male workers hired by the year and living with the family of the employer was 441 crowns ($118.19). To this should be added the value of board and lodging, which may be estimated at 354 crowns ($94.87) for the year. The annual average wage of female domestics was 264 crowns ($70.75), with 302 crowns ($80.94) additional estimated for board and lodging. These wages are an increase of 30 per cent over those prevailing in 1910.

The daily wage of day workers (males) was found to be about 3.5 crowns ($0.94) for the spring and summer months, 3.75 crowns ($1.01) during the harvest season, and 2.5 crowns ($0.67) during the winter months. The corresponding rates for female day workers were 2 crowns ($0.54), 2.33 crowns ($0.62), and 1.5 crowns ($0.40), respectively.

The daily hours of work of all agricultural laborers in Denmark vary from 9 to 10 hours in the spring and summer, 10 to 10½ hours during harvest, and 8 to 8½ hours in winter. These hours have remained practically unchanged since 1905.

——*Statistiske Efterretninger udgivet af det Statistiske Departement. Copenhagen July 21, 1916; August 5, 1916; August 22, 1916.*

Contain retail prices (average and index numbers) July, 1916, emigration in 1915, and unemployment in May, 1916.

France.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale, Paris. June, 1916. (Vol. 23, No. 6.)*

Besides containing a special study on the volume of employment, begun shortly after the outbreak of the war, this volume includes current reports on strikes and lockouts, operations of the governmental unemployment fund and the central employment exchange, together with special articles on the application of the minimum-wage law enacted in 1915. Labor conditions in foreign countries are briefly reviewed. Current legislation and judicial decisions are noted.

——*Bureau de la Statistique Générale de la France. Résultats statistiques du recensement générale de la population, effectué le 5 mars 1911. Vol. 1, part 2. Paris, 1915. 168 pp.*

Forms the second part of the first volume of the general population census of March 5, 1911. The first part of this volume showed the so-called "legal" population, i. e., the persons habitually residing in each locality, while the second part shows the "present" population, based on individual schedules for all persons present in each locality on the day of the enumeration. On March 5, 1911, the "legal" population was 39,602,258, and the "present" population 39,192,133. The "present" population is shown for all France and for the individual Departments by sex, age, conjugal condition, place of birth, and literacy. In an appendix the same data are shown for foreign countries.

France.—*Ministère du travail et de la Prévoyance Sociale. Conseil Supérieur du Travail. Allaitement maternal au magasin et à l'atelier. Procès-verbaux, enquête et documents. Paris, 1916. 24 pp.*

A bill providing that mothers working in mercantile or industrial establishments be granted one hour each day or half an hour twice a day in which to nurse their infants less than 1 year old, without reduction of wages, was passed on June 12, 1913, by the Chamber of Deputies. The present volume contains a report on this bill by the permanent committee of the Superior Labor Council. The report advocates legislation still more liberal to mothers. A new bill drafted by the committee provides in addition that mothers may nurse their infants in the establishment and that each employer must furnish a decent secluded place to employed mothers who nurse their infants.

In an appendix is given similar legislation in Denmark, Spain, Italy, Norway, Argentina, Roumania, and Sweden.

Germany—*Amtliche Nachrichten des Reichsversicherungsamts. Berlin. June and July, 1916.*

Current reports on the operation of the German social insurance system; laws amending the Insurance Code are reproduced (see p. 58).

Great Britain—*Board of Trade. General report to the Board of Trade upon the accidents that have occurred on the railways of the United Kingdom during the year 1915. London, 1916. 17 pp.*

This report is presented under three general heads: (1) Train accidents; (2) Accidents caused by the movement of trains and railway vehicles exclusive of train accidents; (3) Accidents on railway premises not due to train accidents or to the movement of trains and railway vehicles. These are further subdivided in each of the three groups according as they relate to passengers, servants of the railways, and other persons. The following table is a general summary of all accidents:

NUMBER OF PERSONS KILLED OR INJURED ON THE RAILWAYS OF THE UNITED KINGDOM IN 1915, COMPARED WITH 1914, SHOWING THE PER CENT OF INCREASE OR DECREASE.

Group.	1914.		1915.		Per cent of increase 1915 over 1914.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1. Train accidents:						
Passengers	6	322	269	1,432	[1] 4,383.3	[1] 344.7
Servants	8	115	9	183	12.5	59.1
Other persons	....	1	....	2	....	100.0
2. Accidents due to movement of trains and railway vehicles, exclusive of train accidents:						
Passengers	119	2,118	162	2,355	36.1	11.2
Servants	417	4,950	403	4,962	[2] 3.4	.2
Other persons	565	344	521	334	[2] 7.8	[2] .3
3. Accidents on railway premises not including 1 and 2:						
Passengers	(3)	(3)	6	708	....	....
Servants	(3)	(3)	59	21,202	....	....
Other persons	(3)	(3)	40	562	....	....
Total	1,115	7,850	1,469	31,740	[4] 22.3	[4] 18.1

[1] This increase is due to one accident in which 227 persons were killed and 246 were injured.
[2] Decrease.
[3] Data not available.
[4] Based upon the totals of groups 1 and 2 only.

Of the 22,472 persons injured and 105 killed in accidents on railway premises, incidental to and not directly connected with railway working, the report states that "the bulk of them were due to misadventure and comparatively few could be attributed to preventable causes."

GREAT BRITAIN.—*Board of Trade Labor Gazette. London. August, 1916.*

Current review of the labor market and volume of employment in the principal industries, reports from the labor exchanges, and labor conditions in foreign countires; also special articles on employment in Germany, retail food prices, and English and German food production. Current court decisions affecting labor are reviewed.

—— —— *Dope poisoning* [*London, 1916*]. *4 pp.*

—— *Factory Inspector's Office. Nitrous fumes.* [*London, 1916*]. *1 p.*

—— —— *T N T Manufacture: Precautionary measures, 1916.* [*London, 1916.*] *20 pp.*

See p. 52.

—— *Local Government Board. Forty-fifth annual report of the local government board, 1915–16. Part II—Housing and town planning. London, 1916. 19 pp.*

"During the year to which the present report relates there has been a marked diminution in the activity of local authorities generally in housing matters." Private building continues also to be much restricted, "and it is to be feared that in many districts in England and Wales there exists, or will exist on the conclusion of the war, a very serious need for additional accommodation for persons of the working class."

The following table shows the amount of loans and the number of homes erected since December 3, 1909:

NUMBER AND AMOUNT OF LOANS AUTHORIZED FOR THE ERECTION OF HOUSES, 1910 TO 1916.

Year ending Mar. 31—	Urban authorities.			Rural authorities.			Total.		
	Number of authorities.	Amount of appropriations.	Houses to be built.	Number of authorities.	Amount of appropriations.	Houses to be built.	Number of authorities.	Amount of appropriations.	Houses to be built.
1910	2	$65,844	78	1	$1,314	....	3	$67,158	78
1911	12	491,322	464	1	1,216	....	13	492,538	464
1912	29	980,921	882	16	133,561	139	45	1,114,482	1,021
1913	46	1,634,536	1,549	22	289,834	331	68	1,924,370	1,880
1914	79	2,753,758	2,465	45	942,057	871	124	3,695,815	3,336
1915	110	4,197,069	3,264	72	1,278,600	1,144	182	5,475,669	[1] 4,408
1916	14	2,269,677	1,917	10	177,705	154	24	2,447,382	2,071

[1] Including 1 lodging house.

GREAT BRITAIN.—*Registrar of friendly societies. Friendly societies, industrial and provident societies, building societies, trade-unions, workmen's compensation schemes, loan societies, scientific and literary societies, post office, trustee, and railway savings banks. Report of the chief registrar of friendly societies for the year ending December 31, 1915. Part C: Trade-unions. London, 1916. xxv, 10 pp.*

On December 31, 1914, there were upon the register 690 unions; 643 made returns showing 3,261,050 members, and funds amounting to £7,013,048 ($34,128,783.58), the average contribution per week from each member being 6½d. (13.2 cents). About £890,000 ($4,331,185) was expended in unemployment benefits, including £170,000 ($827,305) for the unemployment insurance benefit); £670,000 ($3,260,555) in dispute benefits; £680,000 ($3,309,220) in sickness and accident benefits; £160,000 ($778,640) in funeral benefits; and a further £540,000 ($2,627,910) in benefits of a miscellaneous character. The average amount of unemployment benefit paid per member was 5s. 5d. ($1.32).

—— *(Scotland.)—Government Committee on War Organization in the Distributing Trades in Scotland. Second report of the committee, 28th March, 1916. Edinburgh, 1916. 4 pp.*

This committee was appointed "to consider how far, and by what means, it will be practicable so to readjust the conditions of employment in the distributing trades, both wholesale and retail, in Scotland, as to release a larger number of men for enlistment or other national services, with the minimum of interference with the necessary operations of those trades." Returns received by the committee from 4,306 employers indicated 10,170 employees already released for military service, 11,440 men of military age still employed, 1,834 who could still be released, and 3,508 substitutes required, including 640 women and 2,818 men ineligible for military service. The committee emphasizes the importance of the recommendations contained in its first report regarding the establishment of trade committees to deal with such matters as reorganization, technical training, the extension of early closing and dinner-hour closing. "Special reference may be made to the desirability of extending early closing and dinner-hour closing, wherever practicable, so as to make employment in the distributing trades more attractive."

The first report of this committee was summarized in the MONTHLY REVIEW of April, 1916 (Vol. 2, No. 4, p. 106).

INDIA.—*Annual report of the working of the Indian factories act, 1911, in the Punjab, Delhi, and Northwest Frontier Provinces, for the year 1915. Punjab, 1916. 59 pp.*

The report indicates a general improvement in the conditions of factory labor, including sanitary reforms and improvements in ventilation and in the fencing of machinery. It is noted that in the Punjab the guarding of machinery was accompanied by an immediate reduction in the number of fatal and serious accidents, the average per 100 operatives employed in 1915 being 0.65 as against 0.72 in 1914. It is recommended that the age at which children may be permitted to work be raised from 9 to 10 years. The belief that women were being worked in excess of the legal 11 hours per day in certain ginning factories is noted, and as to children operatives it is stated that in many factories they "look fagged out, jaded, undersized, and unhealthly in appearance." The range of wages paid to skilled and unskilled laborers in the three Provinces in 1915 was as follows:

RANGE OF WAGES PAID SKILLED AND UNSKILLED LABOR IN FACTORIES IN THE PUNJAB, DELHI, AND NORTHWEST FRONTIER PROVINCES, INDIA, IN 1915.

Province.	Skilled.[1]		Unskilled.[2]	
	Highest.	Lowest.	Highest.	Lowest.
Punjab	$42.12	$2.59	$0.20	$0.04
Delhi	48.60	3.89	.20	[3] .085
Northwest frontier	35.64	4.86	.20	.08

[1] Per month.
[2] Per day.
[3] The report gives this rate as 4a. 6p., but it is not clear whether the "p" stands for the Indian coin "pie" or "pice." If the former, the equivalent is 8½ cents; if the latter, the equivalent is 11 cents.

ITALY.—*Bollettino dell' Ispettorato dell' Industria e del Lavoro. Ministero di Agricoltura, Industria e Commercio. Ufficio del Lavoro. Rome. January–February, 1916. (Bimonthly.)*

Special articles on the factory-inspection service and an account of an accident in connection with a Garnett machine in a woolen mill in Turin and of one connected with the operation of a grindstone for the sharpening of agricultural implements.

——*Bollettino dell' Ufficio del Lavoro. Ministero dell' Industria, Commercio e Lavoro. Rome. August 1, 1916. (Semimonthly.)*

Current reports on the labor market, labor disputes, employers' and workmen's organizations, retail prices, court decisions affecting labor; also articles on labor in foreign countries and one on tuberculosis among employees of retailers of wine in Paris.

——*Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Previdenza. Provvedimenti in materia di economia e di finanza emanati nella Svizzera in seguito alla guerra europea. Part 1: July 31, 1914, to December 31, 1915. Rome, 1916. 246 pp. (Annali del credito e della previdenza. Series II, vol. 16, part 1.)*

The present volume gives the text of all economic and financial measures—laws, decrees, ordinances, circular orders, etc.—enacted in Switzerland between July 31, 1914, and December 31, 1915, on account of the European war.

————*Ufficio del Lavoro. Provvedimenti di carattere sociale emanati all' estero durante la guerra europea fino al 30 aprile 1915. Rome, 1915. 109 pp. (Supplemento al Bollettino dell' Ufficio del Lavoro. No. 26.)*

A compilation of social measures enacted during the war up to April 30, 1915, in Great Britain, France, Germany, and Austria.

——————*Statistica degli scioperi avvenuti in Italia nell' anno 1913. Rome, 1916. xv, 502 pp. (Pubblicazioni dell' Ufficio del Lavoro, series B, No. 47.)*

This recently published report of the Italian labor office on strikes and lockouts in Italy during 1913 shows that the number of strikes in industry continued to decrease during the year under review, the total number reported being 810, the lowest since 1905. In contrast to this decrease in the number of strikes, the report shows an enormous increase in the number of strikers, which total 384,725, as compared with 144,124 in 1912, and even exceeds the previous highest total of 321,499 for 1907. The report ascribes this large number of strikers to the fact that sympathetic strikes of large extent took place during the year, the most extensive among these being the general strike in Milan. This strike, originating among workmen of the railroad car shops in Milan, was soon joined in by all machinists and metal workers (about 30,000) and ultimately participated in by all the workmen (about 90,000) of Milan and by about 87,000 workers in other industrial and agricultural centers of the Kingdom. Altogether, 10 sympathetic strikes, involving 258,630 strikers, took place during 1913, leaving a total of 126,095 strikers for the remaining 800 strikes.

The duration of the strikes is shown in the following table:

DURATION OF STRIKES IN INDUSTRY (INCLUSIVE AND EXCLUSIVE OF SYMPATHETIC STRIKES), 1913.

Duration.	Inclusive of sympathetic strikes.		Exclusive of sympathetic strikes.	
	Per cent of strikes.	Per cent of strikers.	Per cent of strikes.	Per cent of strikers.
Up to 1 day	21.4	15.5	21.6	14.3
Over 1 to 5 days	35.3	23.7	35.0	30.5
Over 5 to 10 days	17.4	31.6	17.3	17.4
Over 10 to 20 days	11.5	21.3	11.4	13.4
Over 20 to 30 days	4.8	1.3	4.9	4.2
Over 30 to 50 days	5.0	3.3	5.0	10.0
Over 50 to 75 days	2.2	.8	2.3	2.3
Over 75 to 100 days	1.4	2.0	1.5	6.2
Over 100 to 150 days	.4	.5	.4	1.6
Not reported	.6	....	.6	.1

Demands relating to wages were the most numerous (718, or 49.18 per cent), those relating to organization (286, or 19.50 per cent). hours of labor (158, or 10.82 per cent), and discipline (141, or 9.66 per cent), come next in the order named. The report estimates that the strike movement during 1913 has caused to the workmen a pecuniary loss amounting to approximately 15.3 million lire ($2,952,900).

The results of the industrial strikes vary greatly according as they are computed inclusively or exclusively of the sympathetic strikes, as may be seen from the following table:

RESULTS OF STRIKES IN INDUSTRY (INCLUSIVE AND EXCLUSIVE OF SYMPATHETIC STRIKES), 1913.

Result of strikes.	Inclusive of sympathetic strikes.			Exclusive of sympathetic strikes.		
	Per 100 strikes.	Per 100 strikers.	Per 100 workdays lost.	Per 100 strikes.	Per 100 strikers.	Per 100 workdays lost.
Successful	17.5	4.3	2.3	17.7	13.0	3.9
Mainly successful	12.2	4.4	13.0	12.4	13.6	23.3
Compromised	12.4	5.0	15.3	12.5	15.2	27.4
Partly successful	20.1	10.3	19.2	20.4	31.4	34.6
Failed	32.1	6.6	5.6	32.2	20.2	10.0
Not reported	5.7	69.4	44.6	4.8	6.6	.8

Labor organizations directed or managed 497, or 61 per cent, of the 810 strikes in industry.

Mediation was resorted to for the settlement of 350, or 43 per cent, of the 810 strikes, and arbitration, or mediation and arbitration combined, was found necessary in 11 instances. The 43 per cent of all strikes noted as settled by mediation involved, however, 235,834, or 61 per cent, of all persons striking.

The number of agricultural strikes decreased from 176 in 1912 to 97 in 1913. The decrease in the number of strikers was, however, less marked, the respective figures being 95,841 and 79,842. About 60 per cent of these strikes had a duration of not over 5 days. Most of the strikes were caused by demands relating either to organization or wages.

A total of 21 lockouts in industry is reported for 1913. They involved 21,098 workmen out of a total of 23,961 employed in the establishments affected and caused a loss of 638,777 workdays. The most important lockout as to number of locked-out workers (8,850) and duration (Nov. 15, 1913, to Jan. 31, 1914) was that in the marble industry in Carrara. The wage loss in all lockouts was approximately 2.6 million lire ($501,800). From the viewpoint of the empoyers, 3 lockouts were terminated successfully, 3 mainly successfully, 4 were compromised, 2 were partly successful, 3 failed, and in 6 the result is unknown. Only one lockout took place in agriculture in 1913. It involved 500 laborers, began on January 19, and terminated April 21.

NETHERLANDS.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague. July 1, 1916 (Vol. 11, No. 7).*

Contains the usual current data on the state of the labor market, unemployment and unemployment insurance, employment exchanges, strikes and lockouts, organization of employers and employees, wholesale and retail prices; also an account of the progress of labor legislation through Parliament and a review of labor conditions in foreign countries.

NEW SOUTH WALES.—*Department of Mines. Annual report for the year 1915. Sidney, 1916. 213 pp. 25 charts and diagrams.*

The value of the output of metals in 1915 was £10,064,569 ($48,979,225.04); in 1914 the value was £10,499,720 ($51,096,887.88). The following table shows the amount produced and the value of the more important metals:

TOTAL PRODUCTION AND VALUE OF EACH SPECIFIED MINERAL IN 1915 AS COMPARED WITH 1914.

Mineral.	1914		1915	
	Output.	Value.	Output.	Value.
Coal	10,390,622.00	$18,189,813.90	9,449,008.00	$16,665,961.99
Silver, lead, zinc	[1] 722,317.85	22,542,017.32	[1] 503,997.20	21,571,588.56
Copper	6,607.00	1,336,686.42	6,793.45	1,140,887.66
Tin	2,316.65	1,299,988.15	2,188.00	1,298,284.87
Gold	[2] 124,507.00	2,573,760.45	[2] 132,498.00	2,738,958.66
Iron	75,150.00	1,237,341.69	76,318.60	1,299,355.50

[1] This is silver-lead, ore, concentrates, etc., and does not include ingots and matte, of which 2,871,559 ounces were produced in 1914 and 3,237,432 in 1915.

[2] Ounces.

The report shows 31,411 persons employed in and about mines, this being a decrease of 6,059 from 1914. More than half of this number (57.1 per cent) was employed in the coal and shale mines. The number of fatal accidents in 1915 was 37, as against 43 in 1914, and the number of serious injuries was 84, being a decrease of 28 from 1914. Most of these accidents occurred in coal and shale mining. The number killed per 1,000 employed was highest in copper mining, being 3.282, and the number injured per 1,000 employed was highest in silver, lead, and zinc mines, being 5.211. The report of the miners' accident relief fund gives 23,477 as the average aggregate number of contributors, the income of the fund being £57,936 ($281,945.54). On December 31, 1915, the invested funds amounted to £330,000 ($160,594.50). The allowances payable at December 31, 1915, in respect of fatal accidents and cases of permanent disablement were at the rate of £34,346 ($167,144.81) per annum. The report includes detailed statistics of each mineral produced.

NEW SOUTH WALES.—*The New South Wales Industrial Gazette, issued by the Department of Labor and Industry. Sidney. June, 1916 (Vol. 10, No. 2).*

Contains the usual current material on the labor market, cost of living, minimum wages, retail prices, labor exchanges, factory orders, wages rates under industrial arbitration, and the legislative and judicial record for the month; also reports from wages boards and on industrial agreements.

NEW ZEALAND.—*Department of Labor. Twenty-fifth annual report, 1916. Wellington, 1916. 21 pp.*

Covers the financial year ending March 31, 1916. "The various paragraphs deal chiefly with such items as may be noteworthy on account of the war." The report notes a smaller number of applicants for work than during any other period in the history of the department, and that of those applying for work a high percentage was assisted. The employment bureaus were able to offer employment, both government and private, to all classes of workmen. During the year under report 5,978 persons were assisted, of which 4,394 (73.5 per cent) were employed in government work. The overtime worked during the year was 432,250 hours. This is an increase of 45.7 per cent over that of the preceding year, "mainly contributed to by those trades engaged in the manufacture of articles of military requirement." A total of 1,065 accidents, of which 3 were fatal, in factories is reported, an increase of 10.1 per cent over 1914–15. Seven strikes are reported. Arrears of wages amounting to £1,688 11s. 7d. ($8,217.47) were collected from employers and handed over to the workers concerned. Fifty-two cases were dealt with under the workmen's compensation act. An unusual feature, it is stated, has been the extensive employment of girls in the place of men in various vocations, notably in banks.

—— *Government Insurance Department. Accident Insurance Branch. Annual report for the year ended 31st December, 1915. [Wellington, 1916] 1p.*

Shows premium income of about £23,466 ($114,197.29) and claims paid amounting to £9,092 ($44,246.22). The total income, including the balance from the previous year, was £50,564 15s. 2d. ($246,073.40) and the total expenditures were £39,862 7s. 2d. ($193,990.17).

—— *Journal of the Department of Labor. Wellington. July, 1916.*

Contains usual current data on the labor market, employment offices, retail prices, cost of living, trade union statistics and legal decisions affecting labor.

NORWAY.—*Riksforsikringsanstalten. Ulykkesforsikringen for industriarbeidere m. v. 1913. Christiania, 1916. 33*, 79 pp. (Norges officielle Statistik. VI: 79).*

This is the annual report on the operations of the State accident compensation system in Norway for the year 1913. It reports the technical as distinct from the administrative phases of the compensation system, the latter appearing in a special report. The report covers all establishments subject to compensation, except the silver mines of Kongsberg and the State trunk-line railroad, which have their own separate compensation fund. Results of operation from 1895 to date are as follows:

TOTAL NUMBER OF ACCIDENTS, FULL-TIME WORKERS, PREMIUMS AND COMPENSATION PAID, FOR ALL INDUSTRIES IN NORWAY, 1895-1908, 1909-1913.

Year.	Number of establishments.	Number of full-time workers (300 days).	Wages paid.	Amount of premiums.		Compensation paid, reserves, etc.		Number of accidents.			Number of accidents compensated per 1,000 years' work.
				Total.	Per cent of wages	Total.	Per cent of wages	Total.	Compensated.	Causing death.	
1895-1908.	(1)	1,472,189	$331,876,227	$5,166,181	1.6	$5,697,770	1.7	(1)	(1)	(1)	(1)
1909......	19,988	144,425	35,699,871	531,918	1.5	561,549	1.6	5,600	3,866	136	38.8
1910......	19,655	150,771	37,771,501	569,092	1.5	647,369	1.7	5,875	3,986	119	39.0
1911......	20,984	160,809	41,063,989	624,902	1.5	769,725	1.9	7,564	5,020	138	47.0
1912......	21,581	173,783	45,537,923	756,200	1.7	755,948	1.7	8,808	6,183	116	50.7
1913......	23,864	194,477	49,610,403	830,887	1.7	....	1.6	8,849	6,903	137	45.5
1895-1913.	(1)	2,296,454	541,559,914	8,479,180	1.6	8,432,361	1.7	(1)	(1)	(1)	(1)

[1] Not reported.

For further information concerning accident insurance in Norway reference is made to Bulletin No. 157 of this bureau and volume 2 of its twenty-fourth annual report.

NORWAY.—*Sociale Meddelelser utgit av Socialavdelingen under Departementet for Sociale Saker, Handel, Industri og Fiskeri. Christiania, 1916. No. 3.*

Current retail prices and special article on compulsory arbitration in Norway and notes from foreign reports. Official regulations of the State Insurance Institute under various social insurance acts and the results of a child-labor investigation are contained in special supplements.

ONTARIO.—*Department of Agriculture. Twenty-eighth annual report of the factory inspection branch, 1915. Toronto, 1916. 61 pp. Illustrated.*

This report is for the year ending October 31, 1915, during which period 11,455 inspections were made in 467 cities, towns, and villages, in 7,625 factories and mercantile establishments employing 195,762 workers of whom only 39 were dismissed as being under the legal age. Eleven prosecutions were instituted and convictions secured and fines imposed in all but one instance. A decrease in the number of accidents is reported—994, of which 33 were fatal, as against 1,270, of which 52 were fatal, during the preceding year. More than 50 per cent of these accidents were due to causes other than machinery, the largest number, 179 or 18 per cent, being due to falling objects. A few breaches of the law in respect to hours of labor were found, notably violations of the one-hour noon-day regulation for females and youths. The report is largely devoted to a detailed tabulation of the accidents by districts, giving date, employer, place, sex, age, and nature of the injury.

QUEENSLAND.—*The Queensland Industrial Gazette issued by the Department of Labor. Brisbane. July 10, 1916 (vol. 1, No. 5).*

Contains current monthly reports on the labor market, employment offices, retail prices, industrial arbitration awards, trade agreements, factory accidents, etc.

SPAIN.—*Boletin del Instituto de Reformas Sociales. Madrid. July, 1916.*

Contains the usual current administrative reports of the Spanish department of labor, current reports on strikes, cost of living, and labor legislation.

SWEDEN.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm. Number 7, 1916.*

In addition to current reports on the state of employment, retail prices and the cost of living, prices of cattle, supply and consumption of meat, reports from factory inspectors on fatal industrial accidents, etc., this number of the Swedish labor periodical contains special articles on the new accident compensation law enacted in June, 1916; the census of manufacture in Sweden in 1914; strikes and lockouts, 1915; employment of women and children, 1914; operation of the wholesale cooperative society, 1915; special articles on labor conditions in foreign countries. There is noted an amendment of the factory inspection law of 1912 and the pension law of 1913.

—— *Socialstyrelsen. Arbetsinställelser i Sverige år 1915. Stockholm, 1916. viii, 47 pp. (Sveriges officiella statistik; Socialstatistik).*

This volume forms the report of the Swedish bureau of labor on strikes occurring in Sweden in 1915. The material has been used in a special article appearing elsewhere in this number of the REVIEW. (See p. 71.)

SWITZERLAND (CANTON OF ZÜRICH).—*Kantonales Statistisches Bureau. Die Berufswahl der im Frühjahr 1915 aus der Volksschule ausgetretenen Schüler. Winterthur, 1916. 58 pp. (Statistische Mitteilungen betreffend den Kanton Zürich, Heft 122.)*

Statistics as to the choice of occupation of children leaving the elementary schools in the Canton of Zurich in 1915. A summary of this investigation will be found on page 89 of this number of the REVIEW.

—— (CITY OF BERN).—*Verwaltungskommission des Arbeits-und Wohnungsamtes und der Versicherungskasse gegen Arbeitslosigkeit der Stadt Bern. Verwaltungsbericht für das Jahr 1915. Bern, 1916. 18 pp.*

The annual report for 1915 of the single administrative commission in charge of the varied activities of a public renting bureau, a public employment office, and a system of subsidized unemployment insurance for the city of Bern calls attention to how activities of interest to the wage earner not ordinarily considered as related are, however, in many instances in European countries intimately connected in administration.

War conditions have required the employment offices to supply an exceedingly large demand for labor in those industries actively engaged and to look after the workers thrown out of employment in stagnant industries. The following table indicates their activity in 1914 and 1915:

STATISTICS OF THE MUNICIPAL EMPLOYMENT BUREAU OF BERN, 1914 AND 1915.

	Vacant situations.		Applicants.		Situations filled.	
	1914	1915	1914	1915	1914	1915
Male	10,723	9,256	18,656	13,234	8,813	7,752
Female	5,062	4,571	4,731	5,119	2,560	2,539
Total	15,785	13,827	23,387	18,353	11,373	10,291
Female day laborers, laundresses, and charwomen	3,468	2,567	3,432	2,556	3,432	2,556
Grand total	19,253	16,394	26,819	20,909	14,805	12,847

The municipal renting bureau received orders for the renting of 1,533 properties and if to these are added 159 still vacant from the preceding year a total of 1,692 is made, of which 1,520 were apartments and one-family houses.

In the unemployment fund the commission reports a membership of 780 on March 21, 1916, an increase of 29 over the preceding fiscal year. Of the total number of members 521 were skilled and 259 unskilled workers. Heavy demands made on the unemployment fund on account of the economic depression caused by the war induced the commission to suspend the payment of unemployment benefits indefinitely beginning from April 1, 1915. Payments were, however, resumed on November 20 of the same year. The municipal subsidy granted annually to the fund had been increased to 20,000 francs ($3,860). The contributions from the insured workmen amounted to 11,299 francs ($2,180.71) which approximately equals the regular annual municipal subsidy. Up to the end of the fiscal year 446 members, as against 455 in 1914, had received unemployment benefits. Of this total number, 310 were skilled and 136 unskilled workmen. Skilled workmen received daily while unemployed 3 francs (58 cents) if married, and 2 francs (39 cents) if single, while unskilled workmen were given 2.50 francs (48 cents) and 1.50 francs (29 cents) respectively. Only 72 of the insured members received benefits for the maximum period of 60 days. The total amount disbursed for cash benefits was 38,645 francs ($7,458.46).

SWITZERLAND.—(CITY OF ZÜRICH).—*Städtisches Arbeitsamt. Geschäfts-bericht für das jahr 1915. Zürich, 1916. 32 pp., chart.*

This report of the municipal employment office of the city of Zurich for the year 1915 states that the depressing effects of the war upon the labor market were felt somewhat less in 1915 than in the preceding year. As compared with the preceding year, the number of vacant positions increased by 1,198 and that of vacancies filled by 585, while the number of local applicants decreased by 1,625 and that of transient and out of town applicants by 5,951. A summary of the activities of the employment office during the period 1901-1915 is given in the following table:

STATISTICS OF THE MUNICIPAL EMPLOYMENT OFFICE IN ZURICH, 1901-1915.

Year.	Vacant situations.			Local applicants.			Situations filled.			Transient and out-of-town applicants.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
1901	6,343	3,052	9,395	14,487	3,256	17,743	4,518	1,250	5,768	7,560
1905	10,728	3,763	14,491	12,288	3,676	15,964	7,317	1,743	9,060	10,191
1910	9,134	2,998	12,132	13,618	2,440	16,058	7,335	1,719	9,054	10,597
1911	9,430	3,043	12,473	15,681	2,452	18,133	7,499	1.684	9,183	12,498
1912	8.613	3,464	12,077	14,904	2,957	17,861	6,753	1,994	8,747	9,198
1913	7,200	3,315	10,515	13,925	2,642	16,567	5,713	2,124	7,837	9.682
1914	8,471	2,713	11,184	16,485	2,630	19,115	6,904	1,694	8,598	9,533
1915	10,286	2,096	12,382	14,599	2,891	17,490	7,645	1,538	9,183	3,582

VICTORIA.—*Department of Labor. Report on some of the effects of labor legislation and suggestions for attaining greater industrial efficiency. Melbourne, [1916]. 16 pp.*

This report claims that Victorian labor laws have abolished sweating, have made the surroundings of the worker in the factory and outside healthier, safer, more moral, and generally better than before their enactment, and have raised wages in all occupations. A table is inserted which shows that wage increases made by law in trades regulated by the wages boards have amounted to 42 per cent for the 150,000 workers affected. An admittedly incomplete table is also inserted to show that the wages of 5,720 workers out of a total of 200,000 workers not under the wages boards have increased on the average 61 per cent.

An advance of 26.8 per cent, on the other hand, is noted in the cost of living; and, accepting the estimate of 40.7 per cent made by the Commonwealth statistician for the wage increase in all trades, it is claimed that the worker has benefited to the extent of 13.9 per cent.

The report notes that in many instances the manufacturer has benefited in spite of wage increases by being able to pass the effect of such wages on to the consumer. The practice of limiting output is condemned.

As a remedy for this state of affairs, and in order to provide an inducement to the highest endeavor, the report recommends universal profit sharing and piece payment in all trades.

RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

THE AMERICAN LABOR YEAR BOOK, 1916. *Prepared by the department of labor research of the Rand School of Social Science. New York. [1916] 382 pp.*

BURNHAM, A. C., M. D. *The rôle of the physician in industrial medical insurance. Reprinted from the Medical Record, May 22, 1915. 11 pp. (5 by 7¾ inches.)*

—— *A plan for the care of the insured under the proposed health insurance law. Reprinted from the Medical Record, April 22, 1916. 7 pp. (5 by 7¾ inches.)*

CASUALTY ACTUARIAL AND STATISTICAL SOCIETY OF AMERICA, THE. *Proceedings, May 26 and 27, 1916. Vol. II, Part III, No. 6. pp. 335–521.*

CLARK, VICTOR S. *History of manufactures in the United States, 1607–1860. Published by the Carnegie Institution of Washington, 1916. With index, 675 pp.*

COLLIE, SIR JOHN, M. D., J. P. *Articles on industrial accidents and occupational diseases, including suggestions to attending doctors, medical examiners, and claim adjusters. Published by the Employers' Liability Assurance Corporation (Ltd.), of London, England. 66 pp. (4 by 9 inches).*

A reprint of 26 short articles contributed by the author to the Post Magazine and Insurance Monitor of London. The author for many years conducted a large number of medical examinations for various English insurance companies, and these articles exhibit, in the light of his experience, information on certain points which should be useful to those interested in the subject of claims for disablement.

Titles to some of the articles are—

Functional nervous disease (5 articles); malingering in skin disease (2 articles); medicolegal aphorisms (2 articles); notes on the conduct of the medicolegal examinations, with special reference to malingering; notes on lacerated wounds, with special reference to some type of self-inflicted wounds; the pecuniary inducement to malinger.

Many examples met in actual experience are cited to illustrate the points of the author's observations.

COLLINS PUBLICITY SERVICE. *Philadelphia, Pa. Vocational studies. Nursing. School edition, teachers' auxiliary, No. 13. Copyright, 1916. 16 pp. (8½ by 11 inches).*

FABIAN SOCIETY (LIVERPOOL). *Tract No. 14. Industrial conditions after the war; The place of the labor exchange. 1916, 15 pp.*

—— (LONDON). *Fabian Tract No. 5. Facts for Socialists, showing the distribution of the national income and its results. Twelfth edition, 1915. 23 pp.*

FABIAN SOCIETY. *Twenty-third annual report on the work of the Fabian society. * * * 1916; also the rules of the society. 25 pp.*

GEPHART, F. C. *Analysis and cost of ready-to-serve foods: a study in food economics. Chicago, 1915. 71, [12] pp.*

GONZALES, PEDRO LUIS, PROF. *El Contrato de Trabajo. Santiago de Chile, 1912. 106 pp.*

Biennial prize essay of the State University on the question (the labor contract) selected by the faculty of law and political sciences, 1908, 1909.

HOFFMAN, FREDERICK L., LL. D. *The sanitary progress and vital statistics of Hawaii. An address delivered before the Medical Society of Hawaii, Honolulu, March 5, 1915. 82 pp.*

ILLUMINATING ENGINEERING SOCIETY, THE, (Founded in London, 1909). *The Illuminating Engineer, September, 1915, No. 9, Vol. VIII. 39 pp.*

This number (special factory lighting number) contains (pp. 369–390) an abstract of the recently issued first report of the Departmental Committee on Lighting in Factories and Workshops.

INDEPENDENT LABOR PARTY AND THE FABIAN SOCIETY. *Joint Committee. Report for the two years ended April 30, 1913. 12 pp.*

INTERNATIONAL LABOR FORUM, NEW YORK. *Latin-Amercian News Association, 1916.*

Contents: Introduction to labor law of Yucatan, Mexico, by M. C. Rolland; Labor law of Yucatan, Mexico; Appeal to U. S. workers by Mexican workingman; President Gompers issues call for unity of labor in all Pan-America.

JOHNSON, EMORY R., AND COLLABORATORS. *History of domestic and foreign commerce of the United States (two volumes), Vol. I, 363 pp; Vol. II, with index, 398 pp. Published by the Carnegie Institution of Washington, 1915.*

KOBER, GEO. M., ED. *Diseases of occupations and vocational hygiene. Philadelphia [1916] 918 pp., illus.*

LABOR COPARTNERSHIP ASSOCIATION, THE (*formerly Labor Association*), *6 Bloomsbury Square, London. Thirtieth report, * * * 1915. 32 pp.*

MINNEAPOLIS CIVIC AND COMMERCE ASSOCIATION. *Fourth annual report, 1915. 155 pp.*

Contains reports of the association's standing committees on housing, industrial welfare, and unemployment, for the year 1915.

NATIONAL CHILD LABOR COMMITTEE (INC.), *105 E. Twenty-second Street, New York City. The child labor bulletin, August, 1916, vol. 5, No. 2. pp. 84–125.*

Devoted to a discussion, both in editorial form and in special articles, of the recently enacted Federal child labor law, industrial education in New York City, and the street trades.

"The passage of the bill, in spite of all that it will accomplish for the protection of working children, is not the end of the fight," declares an editorial in the bulletin, which continues:

> There must still be State campaigns for laws to protect children in local industries (in stores, street trades, and the night messenger service), campaigns for better school laws, and, most important of all, perhaps, investigations of occupations in which children engage about which little is known. Of these investigations, the survey of children in agriculture, which is now under way, is the most significant. The study of the children employed in the beet fields of Colorado is being followed by an intensive study of the effects of agricultural labor on school attendance in Kentucky. The condition of the tenant farmers and the extent of adult illiteracy are also receiving attention, with a view to discovering the relation of poverty and ignorance to the employment of children on the farms. The agricultural survey is being extended still further to discover what opportunities for schooling there are for the children who migrate during a large part of the year from one agicultural section to another as the crops mature. (Pages 85–86.)

NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION, *140 W. Forty-second Street, New York City. Vocational Education, one of the significant problems of the day. 11 pp.*

NATIONAL WORKMEN'S COMPENSATION SERVICE BUREAU, *13 Park Row, New York City. The industrial compensation rating schedule. Schedule, 77 pp., and table, 31 pp., (5 x 7½ inches).*

A system of measuring the accident hazards in individual manufacturing plants for use in the determination of workmen's compensation insurance rates, adopted by the first conference on schedule rating, New York, July 27, 1916.

O'HARA, EDWIN V., *chairman of the industrial welfare commission, Oregon. A living wage by legislation, the Oregon experience. Salem, Oreg., 1916. 57 pp. See p. 73.*

STUCKEY, LORIN. *The Iowa State Federation of Labor. Iowa City, Iowa. 1915. With index, 147 pp.*

A monograph submitted to the faculty of the graduate college of the State University of Iowa, in partial fulfillment of the requirements for the degree of doctor of philosophy.

ADDENDA.

EMPLOYMENT IN THE STATE OF NEW YORK IN AUGUST, 1916.

The condition of employment in the State of New York in August, 1916, is set forth in the following statement issued by the New York State Industrial Commission. The statement is based upon reports by 1,400 representative firms employing over half a million persons—approximately one-third of the factory workers in the State.

More wages were paid to workers in New York State factories in August, 1916, than in any other month during the last two years. From July to August there was an increase of 2 per cent in wages and a slight increase in number of employees. The increase in total wages in August, 1916, was 32 per cent, as compared with August of last year and 43 per cent, as compared with August, 1914. Increases in total number of employees for the corresponding dates were 18 per cent and 22 per cent, respectively.

In the *stone, clay, and glass products* group there was an increase in wages of 19 per cent and in number of employees of 7 per cent from July to August. The most marked increase both in wages and employees was in miscellaneous stone and mineral products manufacture. The glass industry also reported a marked increase in the amount of wages paid, but there was a slight falling off in the number of employees. The group as a whole paid out two-fifths more wages and employed one-fourth more workers than in August one year ago. The *metals, machinery, and conveyances* group reported an increase of 1 per cent in both wages and employees from July to August. Overtime work and increased rates of pay were contributing factors. Every industry in the group, with two exceptions, reported an increase in both wages and employees. In the manufacture of machinery and of structural and architectural iron work there were decreases in wages of 9 and 5 per cent, respectively, and a decrease of 8 per cent in number of employees in the latter. As compared with August, 1915, the total wages paid in the group as a whole increased by one-half and the number of employees by one-third. The *wood manufactures* group reported 4 per cent increase in wages and 3 per cent increase in employees from July to August. In the saw and planing mill industry and in the manufacture of furniture and cabinetwork, 7 per cent more wages were paid than in July. Each of these two industries likewise reported a substantial increase in number of employees. Musical instruments and miscellaneous wood products reported little change. As compared with August, 1915, the group as a whole paid out one-fifth more wages and employed one-tenth more workers. The *furs, leather, and rubber goods* group reported only a slight change from July to August. The boot and shoe industry, which is by far the largest in the group, paid out 1 per cent more wages to 2 per cent more employees. A decrease in the furs and fur goods industry was offset by increases in the other minor industries. The total wages paid in the entire group were two-fifths greater and the total number of employees was one-fourth greater than in August, 1915. The *chemicals, oils, and paints* group established in August a new high record for wages paid and number of employees, the increase in each being 1 per cent over July. The increase was confined to the drugs and chemicals industry, the other industries in the group reporting negligible decreases. As compared with August, 1915, the group paid out one-fourth more wages to one-fifth more employees. The *paper-making* industry paid out in August 1 per cent less wages to 5 per cent more employees than in July. A new high record in number of employees was established. The slight decrease in amount of wages paid was caused by the closing of some mills for a short time. As compared with August, 1915, one-fourth more wages were paid and one-eighth more workers were employed. In the *printing and paper goods* group negligible increases both in wages and in employees were reported from July to August. The printing industry, which is dominant in this group, reported a slight increase which offset somewhat larger decreases in the other industries. As compared with August, 1915, the group paid out one-seventh more wages and employed one-tenth more workers. The *textiles* group paid out 1 per cent less wages and employed 5 per cent fewer workers in August than in July. Summer vacations were chiefly responsible for this decrease. Each industry, except silk and silk goods and wool manufactures, paid out less wages, and every industry employed fewer workers. The decrease was greatest in the manufacture of cotton goods, caused in great part by a strike in one large concern. As compared with August, 1915, the group as a whole paid out one-fifth more wages and had 6 per cent more workers. The *clothing, millinery, and laundering* group, although employing 2 per cent fewer workers in August than in July, paid out 9 per cent more wages. Men's clothing, the largest industry in the group, paid out 4 per cent more wages than in July. Men's shirts and furnishings reported about half the business done in July, on account of vacations, while women's clothing reported about one-half more business than in July, caused largely by resumption of activities after strikes. Women's underwear and the miscellaneous sewing industry reported decreases both in wages and employees, while women's headwear and laundering-cleaning-dyeing reported increases. As compared with August, 1915, the group as a whole paid out one-fifth more wages and employed one-tenth more workers. The *food, liquors, and tobacco* group reported 1 per cent increase both in wages and in employees from July to August. The manufacture of cigars and tobacco products, the second largest industry in the group, reported an increase of 10 per cent in wages, due in part to resumption of activity following strikes in July. Bakery products, the largest industry in the group, reported a 2 per cent increase. The most serious decrease was reported in the miscellaneous groceries industry. Shortage of crops was partly responsible for the 16 per cent decrease in the canning and preserving industry. Flour, feed, and cereal products reported an increase of 16 per cent. The group as a whole in August, 1916, paid out one-tenth more wages and employed slightly more workers than in August, 1915. The *water, light, and power* industry paid out 3 per cent more wages and employed 7 per cent more workers in August than in July. As compared with August one year ago, one-eleventh more wages were paid and one-twentieth more workers were employed.

Building activity as reported by building departments.—In the 10 cities of the first and second class in New York State the estimated cost of building work (of which new buildings constituted four-fifths) for which permits were granted in August, 1916, was 74 per cent less than in July, 1916, and 23 per cent less than in August, 1915. Albany, Binghamton, Buffalo, and Troy reported substantial increases over July; Syracuse reported a negligible increase; New York City, Rochester, Schenectady, Utica, and Yonkers reported substantial decreases. As compared with August, 1915, increases were reported for August, 1916, in Albany, Binghamton, Buffalo, Schenectady, and Troy. The other five cities reported decreases. The decrease of 81 per cent in New York City from July to August contrasts strongly with the increase of 106 per cent from June to July. The July total in New York City was swelled by reason of the zoning resolution passed by the board of estimate on July 25, 1916, which restricts the height of future buildings. A large number of permits were filed in anticipation of this resolution. Many of these buildings will doubtless not be erected in the near future, if at all.

FEDERAL LIMITATION OF HOURS OF LABOR ON PUBLIC WORKS.

Probably the earliest official act concerning the limitation of the hours of labor of workmen in the Federal service was an order of President Van Buren, issued March 31, 1840, which directed the observance of a 10-hour day on public works for all classes of workmen. The order reads as follows:

"The President of the United States, finding that different rules prevail at different places as well in respect to the hours of labor by persons employed on the public works under the immediate authority of himself and the Departments as also in relation to the different classes of workmen, and believing that much inconvenience and dissatisfaction would be removed by adopting a uniform course, hereby directs that all such persons, whether laborers or mechanics, be required to work only the number of hours prescribed by the ten-hour system."—(Richardson, Messages and Papers of the Presidents, Vol. III, p. 602.)

At this time 11 and 12 hours per day were common for laborers and mechanics in private employment.

One of the earliest enactments of Congress on this subject was the law of December 21, 1861 (12 Stat. at Large, p. 330), which provided:

> That the hours of labor in the navy yards of the United States shall be the same as in the private shipyards at or nearest to the post where such navy yard is established, and the wages to be paid to all employees in such yards shall be, as near as may be, the average price paid to employees of the same grade in private shipyards or workshops in or nearest to the same vicinity, to be determined by the commandant of the navy yard.

This act was amended on July 16, 1862, so as to provide that the wages and hours of labor of employees in the navy yards of the United States should conform, as nearly as might be consistent with the public interests, with those of private establishments of a similar nature.—(12 Stat. at Large, p. 587.)

The agitation for an eight-hour day for wageworkers in the Federal service began about the year 1865. During the first session of the Thirty-ninth Congress (1865–66) several bills and resolutions were introduced in the House and Senate making provision for an eight-hour day for laborers and mechanics employed by or in behalf of the Government of the United States. These measures caused considerable discussion in both Houses of Congress but failed to be enacted into law. The next Congress, however, took up the matter early in its session by the introduction of a bill for an eight-hour day (H. R. 103 40th Cong.) on March 28, 1867, which was enacted into law June 25, 1868, and provides as follows:

> Eight hours shall constitute a day's work for all laborers, workmen, and mechanics who may be employed by or on behalf of the Government of the United States.—(U. S. Compiled Statutes, 1901, sec. 3738.)

At this time persons in private employment commonly worked about 10 hours per day, so that this was a step forward by the Federal Government in the reduction of the hours of labor. This act, however, was largely misunderstood or disregarded by the Government officials in charge of the employment of mechanics and labores. It gave rise to many controversies and complaints, and frequent calls were made upon the Attorney General for interpretation.

The first opinion rendered by the Attorney General on this subject was in regard to the reduction of wages of laborers and mechanics made by officials to correspond with the reduction in hours of labor. In this opinion Mr. Wm. M. Evarts, Attorney General, held on November 25, 1868 (12 Op. A. G., 530), that the act does not absolutely require that employees of the Government must receive as high wages for their eight hours' labor as similar industry in private employment receives for a day's labor of 10 or 12 hours, but it simply requires that the same *worth* of labor shall be compensated in the public employment at the same rate of wages that it receives in private employment.

This construction of the law resulted in a continuance of the practice of paying reduced wages on account of the reduced hours of labor. On May 19, 1869, however, President Grant issued a proclamation directing "That, from and after this date, no reduction shall be made in the wages paid by the Government by the day to such laborers, workmen, and mechanics on account of such reduction of the hours of labor."—(16 Stat. at Large, p. 1127.)

Notwithstanding this proclamation of the President, the practice seems to have continued, for on May 11, 1872, the President issued another proclamation, which recited the proclamation of May 19, 1869, and contained the following:

> And whereas it is now represented to me that the act of Congress and the proclamation aforesaid have not been strictly observed by all officials of the Government having charge of such laborers, workmen, and mechanics; now, therefore, I, Ulysses S. Grant, President of the United States, do hereby again call attention to the act of Congress aforesaid, and direct all officers of the executive department of the Government having charge of the employment of laborers, workmen, or mechanics employed by or on behalf of the Government of the United States to make no reduction in the wages paid by the Government by the day to such laborers, workmen, and mechanics on account of the reduction of the hours of labor.—(17 Stat. at Large, p. 955.)

On May 18, 1872, an act was approved making an appropriation to pay to laborers and mechanics the amount of reduction of wages that they had suffered on account of the above interpretation. The law provided as follows:

> SECTION 2. That the proper accounting officers be, and hereby are, authorized and required, in the settlement of all accounts for the services of laborers, workmen, and mechanics employed by or on behalf of the Government of the United

States between the twenty-fifth day of June, eighteen-hundred and sixty-eight, the date of the act constituting eight hours a day's work for all such laborers, workmen, and mechanics, and the nineteenth day of May, eighteen hundred and sixty-nine, the date of the proclamation of the President concerning such pay, to settle and pay for the same, without reduction on account of reduction of hours of labor by said act, when it shall be made to appear that such was the sole cause of the reduction of wages, and a sufficient sum for said purpose is hereby appropriated out of any money in the Treasury not otherwise appropriated.—(17 Stat. at Large, p. 134.)

In 1876 an opinion was rendered by the Supreme Court of the United States (U. S. *v.* Martin, 94 U. S., 400), which declared that the eight-hour law of 1868 is chiefly in the nature of a direction by the Government to its agents, and is not a contract between the Government and its laborers that eight hours shall constitute a day's work, and that it does not prevent the making of agreements by which a greater or less number of hours of labor may be required, and any claim for the excess of time over eight hours per day is, when accepted by the laborer, a bar to any further proceedings. Another more recent decision (United States District Court for the District of Kentucky, 1897, Coleman *v.* United States, 81 Fed., 824), declared that no action lies to recover for labor in excess of eight hours where monthly pay was received without protest.

During several years that followed, frequent attempts were made in Congress to secure such legislation as would compel a limitation of the working hours of laborers and mechanics in the Government service to eight per day. Among these successful attempts were first, a joint resolution (H. J. Res. 9, 46th Cong.) which declared that, according to the true intent of the act of Congress, of June 25, 1868, eight hours constitute a day's work for all laborers, workmen, and mechanics, that while the act remains upon the statute book no reduction should be made in the wages paid by the Government, by the day, to such laborers, workmen, and mechanics on account of the reduction of the hours of labor and that all heads of departments, officers, and agents of the Government should enforce the law as long as unrepealed; and second, a joint resolution (H. J. Res. 239, 46th Cong.) which provided that, according to the true intent of section thirty-seven hundred and thirty-eight of the Revised Statutes, all laborers, workmen, and mechanics, employed by, or in behalf of, the Government, should thereafter receive a full day's pay for eight hours' work; and that all heads of departments, officers, and agents of the Government should enforce the law as therein interpreted.

The construction placed upon the eight-hour law of 1868 by the Supreme Court of the United States in 1876, and the failure of Congress to pass any remedial legislation, left this law without practical effect, even though it remained on the statute book. This will appear from the following opinions rendered by the Attorney General from time to time and summarized in an opinion rendered April 29, 1882 (17 Op. A. G.), 341:

> 1. The act prescribes the *length of time* which shall constitute a day's work, but it does not establish any rule by which the *compensation* for a day's work shall be determined.
>
> 2. It does not contemplate a reduction of wages simply *because* of the reduction thereby made in the length of the day's work, but, on the other hand, it does not *require* that the same wages shall be paid therefor as are received by those who in similar private employments work a greater length of time per day.
>
> 3. It does not forbid the making of contracts for labor, fixing a different length of time for the day's work than that prescribed in the law.

Another opinion of the Attorney General, rendered on May 2, 1872 (14 Op. A. G., 37), and afterwards reaffirmed, declared that the provisions of the act of June 25, 1868, were not applicable to mechanics, workmen, and laborers in the employ of a contractor with the United States, and that the act was not intended to extend to any others than the immediate employees of the Government.

But while Congress failed to enact legislation providing for a compulsory eight-hour day in the general employment of laborers, workmen, and mechanics, several acts were passed requiring an eight-hour day for letter carriers and for employees of the Government Printing Office. The first of these acts was approved May 24, 1888, and provided as follows:

> Hereafter eight hours shall constitute a day's work for letter carriers in cities or postal districts connected therewith, for which they shall receive the same pay as is now paid as for a day's work of a greater number of hours. If any letter carrier is employed a greater number of hours per day than eight he shall be paid extra for the same in proportion to the salary now fixed by law.—(U. S. Compiled Statutes, 1901, p. 2637.)

A decision of the Supreme Court of the United States concerning the application of this law rendered March 13, 1893, declares that:

> This statute does not require that the eight hours' service shall relate exclusively to the free distribution and collection of mail matter, nor does it otherwise define the nature of said service. It is necessary only that one should be a letter carrier and be lawfully employed in work that is not inconsistent with his general business under his employment in order that he may recover for any employment for a greater number of hours per day than eight.—(United States *v.* Post, 1893, 148 U. S., 124.)

Another act, approved June 2, 1900, limits the weekly hours of labor of letter carriers. It provides as follows:

> Letter carriers may be required to work as nearly as practicable only eight hours on each working-day, but not in any event exceeding forty-eight hours during the six working-days of each week; and such number of hours on Sunday, not exceeding eight, as may be required by the needs of the service; and if a legal holiday shall occur on any working-day, the service performed on said day, if less than eight hours, shall be counted as eight hours without regard to the time actually employed.—(U. S. Compiled Statutes, 1901, p. 2637.)

A provision concerning employees of the Government Printing office was inserted in the urgent deficiency bill approved March 30, 1888, and provided as follows:

> The Public Printer is hereby directed to rigidly enforce the provisions of the eight-hour law in the department under his charge.—(U. S. Compiled Statutes, 1901, p. 2588.)

This last provision was reenforced by the enactment of the following section of an act approved January 12, 1895:

> The Public Printer shall cause work to be done on the public printing in the Government Printing Office at night as well as through the day, when the exigencies of the public service require it, but the provisions of the existing eight-hour law shall apply.—(U. S. Compiled Statutes, 1901, p. 2551.)

In 1892, steps were finally taken to secure the enactment of an effective eight-hour law for all laborers and mechanics employed on Federal public works. For this purpose, an investigation was made by the House Committee on Labor, and on March 8, 1892, the testimony of the Chief of Engineers, the Superintendent of Public Buildings and Grounds, the Chief of the Bureau of Ordnance, the Public Printer, and the chief of the law and construction division of the Supervising Architect's Office of the Treasury Department was taken. The testimony given by these officers, who had charge of practically all of the public works of the Federal Government, showed, according to the report of the committee, that at the time of the investigation, the administration of the eight-hour law of 1868 by the several officials directing Government employees "was not uniform and not intended to be." Following the report of this committee the law of August 1, 1892, was enacted. It provided as follows:

> SECTION 1. The service and employment of all laborers and mechanics who are now or may hereafter be employed by the Government of the United States, by the District of Columbia, or by any contractor or subcontractor upon any of the public works of the United States or of the said District of Columbia, is hereby limited and restricted to eight hours in any one calendar day, and it shall be unlawful for any officer of the United States Government or of the District of Columbia or any such contractor or subcontractor whose duty it shall be to employ, direct, or control the services of such laborers or mechanics, to require or permit any such laborer or mechanic to work more than eight hours in any calendar day, except in case of extraordinary emergency.
>
> SEC. 2. Any officer or agent of the Government of the United States or of the District of Columbia, or any contractor or subcontractor whose duty it shall be to employ, direct, or control any laborer or mechanic employed upon any of the public works of the United States or of the District of Columbia who shall intentionally violate any provision of this Act, shall be deemed guilty of a misdemeanor and for each and every such offense shall upon conviction be punished by a fine not to exceed one thousand dollars or by imprisonment for not more than six months, or by both such fine and imprisonment, in the discretion of the court having jurisdiction thereof.—(U. S. Compiled Statutes, 1901, p. 2521.)

According to the report of the committee recommending the bill which was enacted into this law, it was intended to be an eight-hour law which would be effective. In its explanation of the law, the committee used the following language:

> It makes it unlawful to allow or permit a laborer or mechanic to work more than eight hours in any one calendar day, thus prohibiting evasion in the manner the act of 1868 was evaded.
>
> The measure herewith submitted, it is thought, will secure a practical enforcement of the purpose intended to be secured by the act of 1868. It limits the service and employment of all laborers and mechanics employed by the Government of the United States, by the District of Columbia, or by any contractor or subcontractor of the United States or of the District of Columbia to eight hours in any one calendar day; makes it unlawful for any officer of the United States or of the District of Columbia, or any contractor or subcontractor, whose duty it shall be to employ, direct, or control the services of such laborers or mechanics to require or permit such laborer or mechanic to work more than eight hours in any one calendar day except in cases of extraordinary emergency; makes the willful violation of its provision a misdemeanor, and enforces suitable penalties for such violation.[1]

While the intention of Congress in regard to the enforcement of the eight-hour provision was made clear by these statements, there still remained some misunderstanding as to the scope of the law. Owing to this misapprehension there has been some litigation in the Federal courts, and numerous requests for opinions have been made of the United States Attorney General. The following are extracts from Federal court decisions bearing upon this point:

> To render one amenable to this law he must be an officer or agent of the United States, or a contractor or subcontractor whose duty it is to employ, direct, or control laborers or mechanics upon some of the public works of the United States, and he must have intentionally required or permitted such laborers or mechanics to work more than eight hours in any calendar day. The law does not apply where one builds barges at his own risk and cost, though under Government inspection and under agreement for their sale to the Government if, on completion, they are found to conform to certain prescribed specifications.—(United States District Court for the Southern District of Alabama, 1893, United States *v.* Ollinger, 55 Fed., 959.)
>
> Seamen upon a Government vessel, when engaged in removing obstructions to navigation in rivers and harbors, are employed upon public works of the United States, within the meaning of the above act. The time actually required in the care and repair of appliances necessary to carry on such work must be included within the eight hours, and is a part of the public work.—(United States District Court for the Northern District of Washington, 1894, United States *v.* Jefferson, 60 Fed., 736.)

The foregoing opinion is in apparent conflict with a later ruling in 1907 of the Supreme Court of the United States, three justices dissenting.

> The statute says, "laborers and mechanics * * * employed * * * upon any of the public works." It does not say, and no one supposes it to

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[1] Quoted in Report No. 1272, to accompany bill H. R. 6882, 56th Cong., 1st sess., p. 6.

mean, "any public work." The words "upon" and "any of the," and the plural "works" import that the objects of labor referred to have some kind of permanent existence and structural unity, and are severally capable of being regarded as complete wholes. The fact that the persons mentioned as employed upon them are laborers and mechanics, words admitted not to include seamen, points in the direction of structures and away from the sea.

* * *

* * * The scows and floating dredges were vessels. * * * Therefore all of the hands mentioned in the informations were seamen within the definition in an earlier statute of the United States. * * * Without further elaboration of details, we are of opinion that the persons employed by the two defendant companies were not laborers or mechanics and were not employed upon any of the public works of the United States within the meaning of the act.—(Ellis *v.* United States, 1907, 206 U. S., 246; 27 Sup. Ct., 600.)

The statement that "a corporation as such is not capable of entertaining a criminal intention" is not a defense in case of the violation of such a law as the above, where the prohibited act can be done by a corporation.—(United States District Court for the Northern District of California, 1898, United States *v.* John Kelso Co., 86 Fed., 304.)

The United States has the power to control in regard to the subject matter of this law, although the State in which a building is being erected retains political jurisdiction over the land occupied.—(United States District Court for the Northern District of California, 1898, United States *v.* San Francisco Bridge Co., 88 Fed., 891.)

This law can not be held to provide for compensation for services rendered in excess of eight hours per day.—(United States Circuit Court of Appeals, Ninth Circuit, 1903, United States *v.* Moses, 126 Fed., 58.)

When confronted with an "extraordinary emergency" within the meaning of the statute, the laborers and mechanics [employed in the construction of a dam] may be required or permitted to work overtime in protecting property during the emergency, but not afterward for the purpose of minimizing the losses of the contactor.

* * * Neither the law nor the contract justify the assumption that the work was one of continuing extraordinary emergency, or that a case of extraordinary emergency would cover the time employed in repairing the injuries, and in removing the obstacles caused by the flood. The phrase "continuing extraordinary emergency" is self-contradictory. A condition or conditions which necessarily must continue for years can not be called an uncommon, sudden, unexpected happening, which presents a sudden and unexpected occasion for action.—(United States *v.* Sheridan-Kirk Contract Co., 1907, 149 Fed., 809.)

A contractor for levee work on the Mississippi River made the contention that the undertaking presented "at all times an extraordinary emergency within the meaning of the statute," and this contention was allowed by a circuit court (180 Fed., 502). On appeal, the Supreme Court reversed this ruling, quoting the expression that "the phrase 'continuing extraordinary emergency' is self-contradictory," and saying:

The building and repair of levees on the Mississippi River is one of the most important and conspicuous of the public works of the United States, and if it had been intended to exempt it from the provisions of the act of August 1, 1892, which declared a public policy in regard to labor, it would have been expressed.—(United States *v.* Garbish, 1911, 222 U. S., 257; 32 Sup. Ct., 77.)

Bargemen engaged in transporting stone for use in the construction of a jetty in a harbor, all work being done offshore, were held not to be within the act, on the authority of Ellis *v.* United States, supra.

The barge was a maritime vessel. She was engaged in a maritime duty. The men were entitled to a maritime lien on her for their wages, for their work was of a maritime character. Their labor contributed to the work in which the barge was engaged, and they were clothed with the rights of seamen.—(Breakwater Co. *v.* United States, 1911, 183 Fed., 112.)

The following are summaries or extracts from opinions which have been rendered by the United States Attorney General on the application of the eight-hour lay of August 1, 1892:

As this new timber dry dock is intended to be a valuable and permanent improvement of real estate belonging to the United States, and is solely for its use and benefit, it is * * * to be regarded as one of the "public works" of the United States under this eight-hour law.—(20 Op. A. G., 445.)

Contracts for supplying post-office lock boxes, lock drawers, locks, pulls, plates, etc., for various public buildings throughout the United States, to be delivered by the contractors at the freight depot at the point of destination and placed in position in the buildings by the Government, were held not to be within the provisions of the statute.—(20 Op. A. G., 454.)

The statute, while in one sense restricting and in derogation of the common right of parties to contract, is nevertheless remedial, and is entitled to a fairly liberal construction. * * * The law as to laborers and mechanics in the direct employment of the Government and of the District of Columbia, is general; and the limitation to public works applies only to such persons as are in the employ of contractors and subcontractors. * * * As to others—as, for instance, sailors or others on shipboard, or teamsters—their employment being peculiar, they might well be held to be, as a matter of fact, neither laborers nor mechanics within the meaning of this law.—(20 Op. A. G., 459.)

The statute does not apply to foremen of mechanics employed to direct the mechanical labor of prisoners at the Fort Leavenworth Military Prison, whose hours of labor exceed eight per day.—(21 Op. A. G., 32.)

Although Congress has no power to enact laws which shall operate beyond the jurisdiction of the United States, still it has the power to determine what shall be the length of a day's work of any and all persons employed by the Government or by contractors upon any public works undertaken by the United States anywhere. * * * By the letter of the law, therefore, the hours of labor of all laborers and mechanics engaged in the construction of the Panama Canal are limited to eight hours in any one calendar day, whether employed directly by the United States or by a contractor or subcontractor with the United States. * * * The act of 1892 does not apply to the office force of the Isthmian Canal Commission stationed on the Isthmus of Panama, or to any of the employees of the Government who are not within the ordinary meaning of the words "laborers and mechanics." (25 Op. A. G., 441. See act of June 30, 1906, below.)

Toolmen and repairers and cleaners of machinery, whose work must be done before or after the day's work of employees in machine shops where the regular force of workmen is within the provisions of the law, are likewise included therein if fairly coming within the description of laborers and mechanics, whether they are paid by the year, month, or day. (25 Op. A. G., 465.)

The employees of a corporation engaged in the business of a common carrier, even though the United States owns practically all of the stock of such corporation, and is largely served by it in the prosecution of a public work, as is the case with the Panama Railroad & Steamship Line, are not within the provisions of this statute, being employees of the corporation and not of the United States. (25 Op. S. G., 465.)

The act * * * does not apply to vessels under construction for the Navy by contract with builders at private establishments. The case of material for such vessels, as for instance, armor, guns, and other articles obtained under special contracts, is *a fortiori;* and, besides, rests fully on the ruling of Attorney General Miller in 20 Op., 454, as above cited, which is hereby expressly approved and affirmed. (26 Op. A. G., 30.)

Presumably, quartermaster's supplies for the use of the Army are such as, generally speaking, are consumed sooner or later in the using. [The act does not apply.] (26 Op. A. G., 36.)

There is no conflict between the act of August 1, 1892, and the proviso to section 4 of the act of July 17, 1902. [Reclamation act; see below.] The "extraordinary emergency" of the former act would apply to the latter. The acts are to be construed together [and it is held that it was not], the intention of Congress, by the proviso in the reclamation act and the use of the term "construction work," either to displace the provisions of the act of August 1, 1892, as to laborers and mechanics not strictly engaged in "construction work," or to exclude the exception of an "extraordinary emergency." * * * The eight-hour law applies fully to contractors on the irrigation works constructed by the United States. (26 Op. A. G., 64.)

Blacksmiths and their helpers, firemen, and pumpmen are either mechanics or laborers. (26 Op. A. G., 64.)

Engineers of the Reclamation Service are responsible to the extent of requiring the law to be observed and reporting violations of it. (26 Op. A. G., 64.)

As to employees engaged in the construction of a jetty at the mouth of the Columbia River, the following ruling was made:

Upon the questions suggested by your communication you are advised that the eight-hour law applies to this work, and that I fully concur with the view of your [War] Department * * * that those who fairly come within the ordinary meaning of the words "laborers and mechanics" should be restricted to no more than eight hours of effective labor upon each calendar day, irrespective of enforced idleness on other days, except when a sudden emergency must be met by prompt action. (26 Op. A. G., 278.)

I think that the eight-hour day means eight hours of effective labor, and, therefore, so far as your questions present the case of laborers and mechanics who, from the exigencies of the situation, must wait until after the completion of the regular day to finish their work, I am of the opinion that the blasting, cleaning of tracks, repair of machinery, and all other similar work essential to prompt and continuous service in the regular day may be legally done before and after the regular hours. To be more specific, laborers and mechanics who are called upon to do two hours' work, for example, before or after the regular day begins or ends have no just cause for complaint that the law is violated if they are only called upon to work six more hours during the regular hours. (26 Op. A. G., 64.)

In accordance with the above ruling, it was held in a later opinion that persons employed as lock tenders, lock helpers, lockmen, and in similar employments at the locks of canals owned and operated by the Government may be called upon to render service at any hour of the day, if only the total hours of labor actually performed do not exceed eight. (26 Op. A. G., 605.)

Specifically, it was held that a watchman charged with the duty of keeping the door at a department building, enforcing regulations or reporting their breach, or keeping guard at night was not within the act; so also a laborer in such building who moved furniture, cleaned windows, cut grass on the surrounding grounds, and the like, rendered services more of the nature of a domestic servant than of a laborer within the meaning of the act; the same was said of a hostler whose duty it was to feed, drive, and care for horses and to clean carriages, harness, and stables; and a messenger who swept floors, did general office cleaning, attended fires, and carried messages was held not within the act. (26 Op. A. G., 623.)

The naval appropriation act of June 24, 1910, required vessels built under its provisions to "be built in accordance with the provisions of" the eight-hour law of August 1, 1892. As to the extent of this requirement, it was said:

> The provision in the appropriation act must be construed to apply simply to work done upon the vessel itself at the place where it is built, and not as applying to the manufacture of machinery or other material elsewhere which is to enter into the construction of the vessel. (28 Op. A. G. 358.)

Similarly, the naval appropriation act of March 4, 1911, required the observance of "an eight-hour workday" in the construction of certain vessels provided for in the act. It was held that this direction would not be complied with by an arrangement by which the workmen would be employed 8½ or 8¾ hours for five days, and given a shorter day on Saturday, the aggregate for the week being 48 hours. (29 Op. A. G. 371.)

Besides these rulings by the courts and the Attorney General, Congress took a hand in determining the application of the law to specific undertakings, declaring in the act of June 17, 1902, relating to the construction of irrigation works, that the act of August 1, 1892, should apply to such work; while by an act of June 30, 1906, the eight-hour day was made not to apply to unskilled alien laborers and their foremen and superintendents in the construction of the Isthmian Canal within the Canal Zone.

As to the enforcement of the law and the attitude of the officials of the Government thereto, it was stated in July, 1906, that the practice had grown up for the "inspectors of work done under public contracts, acting in accordance with the department's instructions or approval, to ignore altogether the question whether the Government contractors were obeying the law with reference to the eight hour a day provision, it being the department's attitude that it was the duty of the contractors with the Government to obey the law and not the peculiar responsibility of the department to see that they did so."[1]

Subsequently, in September, 1906, for the purpose of securing prompt enforcement and uniform action among the departments in regard to the law, the following Executive order was issued:

> 1. All departments of the Government under the supervision of which public works are being constructed are hereby directed to notify the representatives stationed at such public works to report at once to their respective departments all cases in which contractors or subcontractors on works now under construction have required or permitted laborers or mechanics in their employ to work over eight hours in any one calendar day.
>
> 2. All Government representatives in charge of construction of public works are further directed that it is part of their duty to report to their respective departments each and every case in which laborers or mechanics are required or permitted to work over eight hours a day on the works under supervision of such Government representatives. Wherever reports showing work in excess of eight hours a day are received by any department they are to be referred to the Department of Justice for appropriate action.
>
> 3. All departments of the Government under the supervision of which public works are being constructed by contract are further directed to have their respective legal officers prepare and forward to the President a list of such statutes and Executive orders as have a direct bearing on contracts for the construction of public works, and with which bidders on such works should be made acquainted.
>
> THEODORE ROOSEVELT.
>
> SEPTEMBER 19, 1906.

It had been ruled in 1892 by an Attorney General that—

> The duty to employ, direct, or control such laborers or mechanics, and the penalty for their wrongful employment, is with the contractor, and not with the Government or any of its officers or agents. (20 Op. A. G. 500.)

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[1] Memorandum addressed to chiefs of bureaus, etc., by Acting Secretary of the Navy, July 17, 1906.

In October, 1906, however, the then Attorney General issued instructions to United States attorneys throughout the country saying that—

> The Government is determined upon a strict enforcement of this statute, and you are directed diligently to investigate all complaints which may come to you from any source of violations of this law, and upon your own initiative to make investigation if there appears to you to be any reasonable ground for suspecting violation of this law.

The Navy Department memorandum quoted from above also laid down the principle that—

> It is the duty of the officers of the Government, with respect to public contracts that are performed under their supervision and for the performance of which they are responsible, to use the powers they have to prevent violations of the law, and especially the Federal law, by the contractors in the work that comes under their supervision.

Defects were found, however, other than lack of enforcement, especially in the restricted application of the act of 1892 as indicated in the case of Ellis *v.* United States, and elsewhere. Steps were taken accordingly to secure additional and amendatory legislation, and on June 19, 1912, at the second session of the 62d Congress, the following act was passed:

[PUBLIC—No. 199.]

An act limiting the hours of daily service of laborers and mechanics employed upon work done for the United States, or for any Territory, or for the District of Columbia, and for other purposes.

SECTION 1. Every contract hereafter made to which the United States, any Territory, or the District of Columbia is a party, and every such contract made for or on behalf of the United States, or any Territory, or said District, which may require or involve the employment of laborers or mechanics shall contain a provision that no laborer or mechanic doing any part of the work contemplated by the contract, in the employ of the contractor or any subcontractor contracting for any part of said work contemplated, shall be required or permitted to work more than eight hours in any one calendar day upon such work; and every such contract shall stipulate a penalty for each violation of such provision in such contract of five dollars for each laborer or mechanic for every calendar day in which he shall be required or permitted to labor more than eight hours upon said work; and any officer or person designated as inspector of the work to be performed under any such contract, or to aid in enforcing the fulfillment thereof, shall, upon observation or investigation, forthwith report to the proper officer of the United States, or of any Territory, or of the District of Columbia, all violations of the provisions of this act directed to be made in every such contract, together with the name of each laborer or mechanic who has been required or permitted to labor in violation of such stipulation and the day of such violation, and the amount of the penalties imposed according to the stipulation in any such contract shall be directed to be withheld for the use and benefit of the United States, the District of Columbia, or the Territory contracting by the officer or person whose duty it shall be to approve the payment of the moneys due under such contract, whether the violation of the provisions of such contract is by the contractor or any subcontractor. Any contractor or subcontractor aggrieved by the withholding of any penalty as hereinbefore provided shall have the right within six months thereafter to appeal to the head of the department making the contract on behalf of the United States or the Territory, and in the case of a contract made by the District of Columbia to the Commissioners thereof, who shall have power to review the action imposing the penalty, and in all such appeals from such final order whereby a contractor or subcontractor may be aggrieved by the imposition of the penalty hereinbefore provided, such contractor or subcontractor may within six months after decision by such head of a department or the Commissioners of the District of Columbia file a claim in the Court of Claims, which shall have jurisdiction to hear and decide the matter in like manner as in other cases before said court.

Sec. 2. Nothing in this act shall apply to contracts for transportation by land or water, or for the transmission of intelligence, or for the purchase of supplies by the Government, whether manufactured to conform to particular specifications or not, or for such materials or articles as may usually be bought in open market, except armor and armor plate, whether made to conform to particular specifications or not, or to the construction or repair of levees or revetments necessary for protection against floods or overflows on the navigable waters of the United States: *Provided*, That all classes of work which have been, are now, or may hereafter be performed by the Government shall, when done by contract, by individuals, firms, or corporations for or on behalf of the United States or any of the Territories or the District of Columbia, be performed in accordance with the terms and provisions of section one of this act. The President, by Executive order, may waive the provisions and stipulations in this act as to any specific contract or contracts during time of war or a time when war is imminent, and until January first, nineteen hundred and fifteen, as to any contract or contracts entered into in connection with the construction of the Isthmian Canal. No penalties shall be imposed for any violation of such provision in such contract due to any extraordinary events or conditions of manufacture, or to any emergency caused by fire, famine, or flood, by danger to life or to property, or by other extraordinary event or condition on account of which the President shall subsequently declare the violation to have been excusable. Nothing in this act shall be construed to repeal or modify the act entitled "An act relating to the limitation of the hours of daily service of laborers and mechanics employed upon the public works of the United States and of the District of Columbia" being chapter three hundred and fifty-two of the laws of the Fifty-second Congress, approved August first, eighteen hundred and ninety-two, as modified by the Acts of Congress approved February twenty-seventh, nineteen hundred and six, and June thirtieth, nineteen hundred and six, or apply to contracts which have been or may be entered into under the provisions of appropriation acts approved prior to the passage of this act.

Sec. 3. This act shall become effective and be in force on and after January first, nineteen hundred and thirteen.

Approved, June nineteen, nineteen hundred and twelve.

As an independent piece of legislation the act called for new rulings by the Attorney General to determine its application. Thus the Secretary of the Navy requested a construction of the provision that limits the hours of labor of any workman "in the employ of the contractor or any subcontractor contracting for any part of said work contemplated" to not more "than eight hours in any one calendar day upon such work." The limiting words "upon such work" were held to restrict the application of the eight-hour provision to employment upon the subject matter of the Government contract only, the Attorney General in 1912 (Oct. 3) saying,

> Clearly, no penalty could be collected under the authority of this provision if the laborer or mechanic were required to labor more than eight hours per day upon some other work than that contemplated by the contract. (29 Op. A. G., 538.)

Another question submitted at the same time related to the extent of inclusion of the phrase "any part of the work contemplated by the contract," the question being at what stage in the segregation and application of materials the eight-hour law became applicable. As to this it was said:

> To determine what class of work is covered by this definition must be largely a matter of administration; but, in my opinion, the general work done by the contractor or a subcontractor in his plant which is applicable and destined to the fulfillment of his contracts with all persons generally does not fall within the law. Only that portion of the work which can be regarded as directed specifically to the fulfillment of the Government contract, and nothing else, falls within the provisions of the act.

A similar ruling to the foregoing was made in response to an inquiry of the Secretary of War as to the construction of a provision of the appropriation act of June 6, 1912 (antedating the eight-hour law of the same year), which prohibits the purchase of ammunition from any persons who do not at the time of commencement of work thereon establish an eight-hour workday for all employees engaged or to be engaged in the work of manufacturing such ammunition. It was held that:

> The provision contained in the act relative to the eight-hour law applies only to employees, laborers, and mechanics while engaged in the work of manufacturing the ammunition named therein, and does not establish any general rule governing the employees of the contractor beyond their occupation in carrying out the work embraced in the contract with the Government. (30 Op. A. G., 16.)

The exception, in the act of June 19, 1912, of supplies purchased by the Government "whether manufactured to conform to particular specifications or not, or for such articles or materials as may usually be bought in open market, except armor and armor plate, whether made to conform to particular specifications or not," was held to exempt from the application of the act articles to be purchased by the Public Printer for use in the Government Printing Office, as leathers, cloth, colors, ink, gold leaf, etc. (30 Op. A. G. 24); as also of the labor involved in the dressing of marble and stone for public buildings, such work not being performed at the sites of the buildings themselves (30 Op. A. G. 211); of dynamos and engines for installation in public buildings, tiles for roofing, terra cotta, bricks, structural iron and steel, lamp standards and brackets, sash, doors, molding, etc (30 Op. A. G. 31); and of cloth for clothing and tents for the Army (29 Op. A. G. 505).

Another question submitted related to the application of the new act to dredging in river and harbor work—employment which had been held not to be covered by the act of August 1, 1892. On the authority of the decision in the case of Ellis *v.* United States, previously noted, the later act was construed as not affecting such employment (29 Op. A. G. 583). This opinion is of less importance, however, in view of the enactment, on March 3, 1913, of a statute amending the act of 1892, which had for one of its specific aims the inclusion of persons employed in constructing, maintaining, or improving a river or harbor. This enactment was made as an amendment of the act of 1892, and reads as follows:

[PUBLIC—No. 408.]

An act relating to the limitation of the hours of daily service of laborers and mechanics employed upon a public work of the United States and of the District of Columbia, and of all persons employed in constructing, maintaining, or improving a river or harbor of the United States and of the District of Columbia.

SECTION 1. Sections one, two, and three of an act entitled "An act relating to the limitation of the hours of daily service of laborers and mechanics employed upon the public works of the United States and of the District of Columbia [shall] be amended to read as follows:

Section 1. The service and employment of all laborers and mechanics who are now, or may hereafter, be employed by the Government of the United States or the District of Columbia, or by any contractor or subcontractor, upon a public work of the United States or of the District of Columbia, and of all persons who are now, or may hereafter be, employed by the Government of the United States or the District of Columbia, or any contractor or subcontractor, to perform services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor of the United States or of the District of Columbia, is hereby limited and restricted to eight hours in any one calendar day; and it shall be unlawful for any officer of the United States Government or of the District of Columbia, or any such contractor or subcontractor whose duty it shall be to employ, direct, or control the services of such laborers or mechanics or of such persons employed to perform services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor of the United States or of the District of Columbia, to require or permit any such laborer or mechanic or any such person employed to perform services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor of the United States or of the District of Columbit, to work more than eight hours in any calendar day, except in case of extraordinary emergency: *Provided*, That nothing in this act shall apply or be construed to apply to persons employed in connection with dredging or rock excavation in any river or harbor of the United States or of the District of Columbia while not directly operating dredging or rock excavating machinery or tools, nor to persons engaged in construction or repair of levees or revetments necessary for protection against floods or overflows on the navigable rivers of the United States.

Sec. 2. Any officer or agent of the Government of the United States or of the District of Columbia, or any contractor or subcontractor whose duty it shall be to employ, direct, or control any laborer or mechanic employed upon a public work of the United States or of the District of Columbia, or any person employed to perform services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor of the United States or of the District of Columbia, who shall intentionally violate any provision of this act shall be deemed guilty of a misdemeanor, and for each and every such offense shall, upon conviction, be punished by a fine not to exceed $1,000 or by imprisonment for not more than six months, or by both such fine and imprisonment, in the discretion of the court having jurisdiction thereof.

Sec. 3. The provisions of this act shall not be so construed as to in any manner apply to or affect contractors or subcontractors, or to limit the hours of daily service of laborers or mechanics engaged upon a public work of the United States or of the District of Columbia, or persons employed to perform services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor of the United States or of the District of Columbia, for which contracts have been entered into prior to the passing of this act or may be entered into under the provisions of appropriation acts approved prior to the passage of this act.

Sec. 4. This act shall become effective and be in force on and after March first, nineteen hundred and thirteen.

Approved, March 3, 1913.

But little is available in the way of official interpretation of this act, a single point of narrow range being to the effect that this law does not apply to laborers employed on the Panama Canal (30 Op. A. G. 139). Obviously this act is of broader application than the act of 1892 in its use of the phrase "upon a public work" in lieu of the phase "upon any of the public works," the latter phrase being held by both the majority and dissenting opinions in the Ellis Case to be of a narrower inclusiveness than the phrase "any public work." The effect of the act on dredge workers is less obvious, since its application is restricted to persons performing "services similar to those of laborers and mechanics in connection with dredging or rock excavation in any river or harbor," and, further, the act does not apply to any person in this line of employment "while not directly operating dredging or rock excavating machinery or tools."

One exemption that is clear affects persons held to be covered by the act of 1892; that is, workers on levees or revetments for protection against floods or overflows on the navigable rivers of the United States, this exception being found both in the act of 1912 and that of 1913. Except where the modifying provisions are specific, it is a fair assumption that the interpretation of the act of 1912 is applicable to the later acts. Authority for this view, especially as to the act of 1913, is found in a statement of the Attorney General to the effect that—

> In the absence of clear evidence to the contrary it must be presumed that in the act of March 3, 1913, Congress intended to amend the act of August 1, 1892, only to the extent provided for in the later act. (Op. A. G., —.)

The foregoing account and discussion is limited to the single line of legislation the object of which was to regulate the working time of employees of restricted definition, i. e., laborers and mechanics employed by or on behalf of the Federal Government, a Territory, or the District of Columbia. The law of June 25, 1868, though unrepealed, is negligible, while those of 1912 and 1913 lie side by side. The relationship of these two laws to each other would appear to be one of coordinate control in some aspects, while in others their fields are more distinct. The provision in the act of 1912 that it was not to be regarded as in any way repealing or modifying the act of 1892 must be held to indicate its separateness from the act of 1913 amending the act of 1892.

Other laws of Congress affecting public employment are an act of August 27, 1912, fixing the hours of labor of letter carriers in the city delivery service and clerks in first and second class post-offices at not more than 8 per day, to be performed within a period of 10 consecutive hours, Sunday work to be compensated for by a time allowance on one of the 6 days following the Sunday on which such work was done.

The law applicable to hours of labor of clerks and other employees in the executive departments is found in an act of March 3, 1893, and is as follows:

> Hereafter it shall be the duty of the heads of the several executive departments, in the interest of the public service, to require of all clerks and other employees, of whatever grade or class, in their respective departments, not less than seven hours of labor each day, except Sundays and days declared public holidays by law or Executive order: *Provided*, That the heads of the departments may by special order, stating the reason, further extend the hours of any clerk or employee in their departments, respectively; but in case of an extension it shall be without additional compensation. * * * —(U. S. Compiled Statutes, 1901, p. 80.)

As disclosed by opinions of the Attorney General and by court decisions, the net effect of the different eight-hour laws of the Federal Government made applicable to public works, and beginning with the act of 1868, may be briefly summarized as follows:

The law of June 25, 1868, while still on the statute books, is only in the nature of a direction.

The eight-hour law of August 1, 1892, however, was mandatory and made it unlawful for officers, contractors, or subcontractors to employ laborers and mechanics on public works of the United States or of the District of Columbia for more than eight hours per day, except in cases of emergency. The term "public works" included all fixed works for public use.

The law of 1892 applied to all laborers and mechanics properly classified as such, who are—

(1) Employed directly by the United States or the District of Columbia.

(2) Employed within the bounds of property of the United States Government.

(3) Working on Government buildings, even though the land occupied is under the political control of a State.

(4) Working on levees on navigable rivers of the United States.

(5) Employed by contractors on public works.

(6) Employed in "construction work" in the Reclamation Service.

(7) Employed in repairing tools or appliances necessary to the prosecution of public works.

The law of 1892 did not apply to:

A. Laborers and mechanics employed in private establishments engaged in—

(1) Manufacturing material for public works, even though such material is to be used for fixtures.

(2) Manufacturing supplies for the quartermaster's department.

(3) Building vessels or barges for the Government.

B. Unskilled alien laborers and their foreman and superintendents engaged in the construction of the Panama Canal.

C. Employees of the Panama Railroad.

D. Watchmen, laborers, hostlers, messengers, and the like employed in and about the Government departments in Washington.

The act did not authorize payments for overtime work.

The term "extraordinary emergency" must be strictly construed, and can not be held to apply to continuing conditions.

A corporation could be held criminally liable for violations.

The observance of an eight-hour day does not imply continuous employment, but means eight hours of effective service within the 24 hours of a calendar day.

Lost time due to adverse conditions of the weather, etc., can not be made up by extra work on another day.

Where work—as on a vessel—must be carried on in accordance with the provisions of the act, this requirement affected only the labor done at the place of construction, and not the preparation of materials.

A specification that an eight-hour workday must be observed is not met by working days of different lengths, aggregating 48 hours per week. The eight-hour act of June 19, 1912—

Does not apply to supplies purchased for the Government, even though manufactured for it in accordance with its own specifications.

Dos not prevent the employment of workmen for additional hours of service on other jobs after having worked eight hours upon the subject-matter of a Government contract:

Does not apply to the dressing of stone for public buildings if not done at the site of the building, nor to the manufacture of fittings and equipment for such buildings;

Does not modify the act of 1892 as to river and harbor work.

The eight-hour act of March 3, 1913—

Does not apply to laborers on the Panama Canal;

Apparently retains the construction and application of the act of 1892 except as specifically provided for by the later act; in particular it includes dredge work in so far as services similar to those of laborers and mechanics are employed, and excludes labor on levees and revetments.

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the Annual and Special Reports and of the bimonthly Bulletin has been discontinued, and since July, 1912, a Bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These Bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual Bulletins falling under each, is given below. A list of the Reports and Bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

No. 1. Wholesale prices, 1890 to 1912. (Bul. 114.)
No. 2. Wholesale prices, 1890 to 1913. (Bul. 149.)
No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. 173.)
No. 4. Wholesale prices, 1890 to 1914. (Bul. 181.)
No. 5. Wholesale prices, 1890 to 1915. (Bul. 200.) [In press.]

Retail Prices and Cost of Living.

No. 1. Retail prices, 1890 to 1911: Part I. (Bul. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. 105: Part II.)
No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. 106: Part II.)
No. 3. Retail prices, 1890 to August, 1912. (Bul. 108.)
No. 4. Retail prices, 1890 to October, 1912. (Bul. 110.)
No. 5. Retail prices, 1890 to December, 1912. (Bul. 113.)
No. 6. Retail prices, 1890 to February, 1913. (Bul. 115.)
No. 7. Sugar prices, from refiner to consumer. (Bul. 121.)
No. 8. Retail prices, 1890 to April, 1913. (Bul. 125.)
No. 9. Wheat and flour prices, from farmer to consumer. (Bul. 130.)
No. 10. Retail prices, 1890 to June, 1913. (Bul. 132.)
No. 11. Retail prices, 1890 to August, 1913. (Bul. 136.)
No. 12. Retail prices, 1890 to October, 1913. (Bul. 138.)
No. 13. Retail prices, 1890 to December, 1913. (Bul. 140.)
No. 14. Retail prices, 1907 to December, 1914. (Bul. 156.)
No. 15. Butter prices, from producer to consumer. (Bul. 164.)
No. 16. Retail prices, 1907 to June, 1915. (Bul. 184.)
No. 17. Retail prices, 1907 to December, 1915. (Bul. 197.) [In press.]

Wages and Hours of Labor.

No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. 128.)
No. 2. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912. (Bul. 129.)
No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. 131.)
No. 4. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. 134.)
No. 5. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912. (Bul. 135.)
No. 6. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912. (Bul. 137.)
No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. 143.)
No. 8. Wages and regularity of employment in the dress and waist industry of New York City. (Bul. 146.)
No. 9. Wages and regularity of employment in the cloak, suit, and skirt industry. (Bul. 147.)
No. 10. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913. (Bul. 150.)
No. 11. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912. (Bul. 151.)
No. 12. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913. (Bul. 153.)
No. 13. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. 154.)
No. 14. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913. (Bul. 161.)
No. 15. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913. (Bul. 163.)
No. 16. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1913. Bul. 168.)
No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. 171.)
No. 18. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914. (Bul. 177.)
No. 19. Wages and hours of labor in the boot and shoe industry, 1907 to 1914. (Bul. 178.)
No. 20. Wages and hours of labor in the men's clothing industry, 1911 to 1914. (Bul. 187.) [In press.]
No. 21. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914. (Bul. 190.) [In press.]
No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. 194.) [In press.]
No. 23. Street railway employment in the United States. (Bul. No. 204.) [In press.]

Employment and Unemployment.

No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. 192.) [In press.]
No. 2. Unemployment in the United States. (Bul. 195.) [In press.]
No. 3. Proceedings of Employment Managers' Conference. (Bul. 196.) [In press.]
No. 4. The British System of Labor Exchanges. (Bul. No. 206.) [In press.]
No. 5. Proceedings of the Employment Managers' Conference of Boston. (Bul. No. 202.) [In press.]

For material relating to these subjects, but not included in this series, see Miscellaneous series, Nos. 1, 10, 12 (Buls. Nos. 109, 172, 183).

Women in Industry.

No. 1. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. (Bul. No. 116.)
No. 2. Working hours of women in the pea canneries of Wisconsin. (Bul. No. 119.)
No. 3. Employment of women in power laundries in Milwaukee. (Bul. No. 122.)
No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bul. No. 160.)
No. 5. Summary of the report on condition of woman and child wage earners in the United States. (Bul. No. 175.)
No. 6. Effect of minimum-wage determinations in Oregon. (Bul. No. 176.)
No. 7. Women in the boot and shoe industry in Massachusetts. (Bul. No. 180.)
No. 8. Unemployment among women in department and other retail stores of Boston, Mass. (Bul. No. 182.) [In press.]
No. 9. Dressmaking as a trade for women. (Bul. No. 193.)

For material relating to this subject, but not included in this series, see Miscellaneous series, Nos. 2, 3, 8 (Buls. 117, 118, 167).

Workmen's Insurance and Compensation (including laws relating thereto).

No. 1. Care of tuberculous wage earners in Germany. (Bul. No. 101.)
No. 2. British National Insurance Act, 1911. (Bul. No. 102.)
No. 3. Sickness and accident insurance law of Switzerland. (Bul. No. 103.)
No. 4. Law relating to insurance of salaried employees in Germany. (Bul. No. 107.)
No. 5. Workmen's compensation laws of the United States and foreign countries. (Bul. No. 126.)
No. 6. Compensation for accidents to employees of the United States. (Bul. No. 155.)
No. 7. Compensation legislation of 1914 and 1915. (Bul. No. 185.)
No. 8. Compensation laws of the United States and foreign countries. (Bul. No. 203.) [In press.]

Industrial Accidents and Hygiene.

No. 1. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. (Bul. No. 104.)
No. 2. Hygiene of the painters' trade. (Bul. No. 120.)
No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bul. No. 127.)
No. 4. Lead poisoning in the smelting and refining of lead. (Bul. No. 141.)
No. 5. Industrial accident statistics. (Bul. No. 157.)
No. 6. Lead poisoning in the manufacture of storage batteries. (Bul. No. 165.)
No. 7. Industrial poisons used in the rubber industry. (Bul. No. 179.)
No. 8. Report of British departmental committee on danger in the use of lead in the painting of buildings. (Bul. No. 188.)
No. 9. Report of the committee on statistics and insurance cost of the International Association of Industrial Accident Boards and Commissions. (Bul. No. 201.) [Limited edition.] ....
No. 10. Anthrax as an occupational disease. (Bul. No. 205.) [In press.]
No. 11. Causes of death by occupation. (Bul. No. 207.) [In press.]
No. 12. Hygiene of the printing trades. (Bul. No. 209.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).

No. 1. Conciliation and arbitration in the building trades of Greater New York. (Bul. No. 124.)
No. 2. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. (Bul. No. 133.)
No. 3. Michigan copper district strike. (Bul. No. 139.)
No. 4. Industrial court of the cloak, suit, and skirt industry of New York City. (Bul. No. 144.)
No. 5. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. (Bul. No. 145.)
No. 6. Collective bargaining in the anthracite coal industry. (Bul. No. 191.)
No. 7. Collective agreements in the men's clothing industry. (Bul. No. 198.)

Labor Laws of the United States (including decisions of courts relating to labor).

No. 1. Labor legislation of 1912. (Bul. No. 111.)
No. 2. Decisions of courts and opinions affecting labor, 1912. (Bul. No. 112.)
No. 3. Labor laws of the United States, with decisions of courts relating thereto. (Bul. No. 148.)
No. 4. Decisions of courts and opinions affecting labor, 1913. (Bul. No. 152.)
No. 5. Labor legislation of 1914. (Bul. No. 166.)
No. 6. Decisions of courts affecting labor, 1914. (Bul. No. 169.)
No. 7. Labor legislation of 1915. (Bul. No. 186.) [In press.]
No. 8. Decisions of courts affecting labor, 1915. (Bul. No. 189.)

Foreign Labor Laws.

No. 1. Administration of labor laws and factory inspection in certain European countries. (Bul. No. 142.)

No. 1. Vocational education survey of Minneapolis. (Bul. No. 190.) [In press.]

For material relating to this subject, but not included in this series, see Wages and hours of labor series, No. 9 (Bul. No. 147); Conciliation and arbitration series, No. 5 (Bul. No. 145); Miscellaneous series, Nos. 6, 7 (Buls. Nos. 159, 162).

Miscellaneous Series.

No. 1. Statistics of unemployment and the work of employment offices in the United States. (Bul. No. 109.)
No. 2. Prohibition of night work of young persons. (Bul. No. 117.)
No. 3. Ten-hour maximum working-day for women and young persons. (Bul. No. 118.)
No. 4. Employers' welfare work. (Bul. No. 123.)
No. 5. Government aid to home owning and housing of working people in foreign countries. (Bul. No. 158.)
No. 6. Short-unit courses for wage earners, and a factory school experiment. (Bul. No. 159.)
No. 7. Vocational education survey of Richmond, Va. (Bul. No. 162.)
No. 8. Minimum-wage legislation in the United States and foreign countries. (Bul. No. 167.)
No. 9. Foreign food prices as affected by the war. (Bul. No. 170.)
No. 10. Unemployment in New York City, N. Y. (Bul. No. 172.)
No. 11. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915. (Bul. No. 174.)
No. 12. Regularity of employment in the women's ready-to-wear garment industries. (Bul. No. 183.)
No. 13. Profit sharing in the United States. (Bul. No. 208.) [In press.]

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U. S. DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
ROYAL MEEKER, Commissioner

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOLUME III—NOVEMBER, 1916—NUMBER 5

WASHINGTON
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MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOL. III—NO. 5 WASHINGTON NOVEMBER, 1916

CONFERENCE ON SOCIAL INSURANCE, DECEMBER 5 TO 9, 1916, WASHINGTON, D. C., CALLED BY THE INTERNATIONAL ASSOCIATION OF INDUSTRIAL ACCIDENT BOARDS AND COMMISSIONS.

ORIGIN OF THE CONFERENCE ON SOCIAL INSURANCE.

This Conference on Social Insurance has been called by the International Association of Industrial Accident Boards and Commissions, a quasi official organization of the official bodies charged with the duties of administering compensation laws in the States of the Union and the Provinces of Canada. The paid membership up to date includes the Province of Ontario, Canada, and the following States: California, Iowa, Illinois, Maryland, Massachusetts, Michigan, Minnesota, Montana, New Jersey, New York, Ohio, Oklahoma, Oregon, Texas, Washington, West Virginia, and Wisconsin.

The character of this association gives to the forthcoming Conference on Social Insurance a peculiar importance and a more than semiofficial sanction. America has lagged behind Europe in the field of social insurance. The eyes of our reformers have gazed Europeward in search of guidance in this and other fields of social activity. The Ninth International Congress on Social Insurance was to have been held in Washington, D. C., September 27 to October 2, 1915. The war has not only prevented the holding of this much-needed congress for considering social insurance problems, but it is now wholly unlikely that conferences and congresses can be arranged for under the direction of this organization for many years to come. Meanwhile our problems of administration and legislation clamor for consideration. We can not wait for the ending of the European war before we give consideration to these problems which press for solution. The International Association of Industrial Accident Boards and Commissions has therefore authorized this Conference on Social Insurance.

PURPOSE.

At this conference will be considered the merits, demerits, defects, and shortcomings in our workmen's compensation laws; needed amendments extending the scope and adequacy of these laws; sickness insurance, existing and proposed, in all its aspects; invalidity and old-age insurance, pensions, and retirement allowances; mothers' pensions and maternity benefits; unemployment insurance; and other matters relating to social insurance.

It is not the purpose of this conference to adopt resolutions committing the conference to particular policies or methods. The rules governing international congresses heretofore held under the auspices of the International Permanent Committee on Social Insurance did not under any circumstances permit the presentation of resolutions committing such congresses to the advocacy of particular policies and methods for attaining desired ends. This rule should be stringently followed in this conference. Much time and consideration are needed to work out the best policies and methods. What is best for one State or section may not be the best for another State or section. It will be a sufficient accomplishment if the problems considered can be clearly defined and definitely stated for the information of legislators and administrators. If this desirable object is to be accomplished, the conference must avoid all resolutions prescribing particular ways and means of securing adequate protection to workers against the hazards of accident, sickness, invalidity, old age, and unemployment.

MEMBERSHIP.

Membership in the Conference on Social Insurance is quite distinct from membership in the International Association of Industrial Accident Boards and Commissions. All members of State delegations, representatives of participating organizations, and individuals who register for the conference will be members of this Conference on Social Insurance. The governors of all the States and Territories in the Union have been invited to send delegates to represent the States and Territories, and in those States having industrial accident boards or commissions to send delegates to represent such bodies. A large number of governors have responded to this invitation and will send delegates.

All organizations, both public and private, which are interested in social insurance may join the conference by paying $25 toward defraying the expenses of the conference. This fee entitles an organization to send delegates to the conference to participate in the discussions. In addition to the membership fee for organizations, an individual membership fee of $2 will be charged to all persons not members of State delegations or representing organizations who register as members of the Conference on Social Insurance.

PROCEEDINGS.

The proceedings of the conference will be published by the United States Bureau of Labor Statistics as a bulletin of that bureau. All who desire can secure this report by so indicating when they register or by writing directly to the United States Commissioner of Labor Statistics.

DISCUSSIONS.

It is important that as many as possible participate in the open discussions from the floor on the various topics to be considered. If members and delegates would come to the conference fully prepared to discuss intelligently and constructively the topics included in the program, no formal papers would be necessary. The shortness of the time of preparation for this conference makes it impossible to have the papers printed and distributed in advance of the meeting. However, each writer of a principal paper has been required to present a summary of his paper within 15 or 20 minutes. Each person scheduled for discussion will be limited to 10 minutes. Those who participate in the open discussions will be limited to 5 minutes. With these time limits rigidly enforced by the chairmen of the different sessions, considerable discussion from the floor should be forthcoming.

In order to avoid the possibility of any clique or faction monopolizing the time, those who wish to discuss a topic should send their names and connection to the chairman of the session during the meeting.

OFFICERS OF THE INTERNATIONAL ASSOCIATION OF INDUSTRIAL ACCIDENT BOARDS AND COMMISSIONS.

Dudley M. Holman, President, Winter Building, Boston, Mass.

Fred. M. Wilcox, Vice President, Member, Wisconsin Industrial Commission, Madison, Wis.

Royal Meeker, Secretary-Treasurer, United States Commissioner of Labor Statistics, Washington, D. C.

COMMITTEE ON SOCIAL INSURANCE.

Royal Meeker, Chairman, United States Commissioner of Labor Statistics.
Dudley M. Holman.
J. B. Vaughn, Chairman, Industrial Board of Illinois.
Fred. M. Wilcox, Member, Wisconsin Industrial Commission.
Wallace D. Yaple, Chairman, Ohio Industrial Commission.

ADVISORS TO THE COMMITTEE ON SOCIAL INSURANCE.

John B. Andrews, Secretary, American Association for Labor Legislation.

William C. Archer, Deputy Commissioner, New York Bureau of Workmen's Compensation.

F. Spencer Baldwin, Manager, New York State Insurance Fund.

W. S. Barnaby, Editor, The Spectator, New York.

Ralph M. Easley, Chairman, Executive Committee, The National Civic Federation.

Henry W. Farnam, Yale University.

A. Lincoln Filene, Wm. Filene Sons Company, Boston, Mass.

Irving Fisher, Yale University.

Lee K. Frankel, Sixth Vice President, Metropolitan Life Insurance Company.

Samuel Gompers, President, American Federation of Labor.

William J. Graham, Superintendent of Group Insurance, Equitable Life Assurance Society.

Frederick L. Hoffman, Statistician, Prudential Insurance Company of America.

Florence Kelley, General Secretary, National Consumers' League.

Bruno Lasker, Assistant Secretary, New York Mayor's Committee on Unemployment.

Julia C. Lathrop, Chief, United States Children's Bureau.

John Mitchell, Chairman, New York State Industrial Commission.

Henry R. Seager, Columbia University.

Ida M. Tarbell, Writer, New York.

William H. Tolman, Director, American Museum of Safety.

Lillian D. Wald, President and Head Worker, Henry Street Settlement.

Mary Van Kleeck, Secretary, Committee on Women's Work, Russell Sage Foundation.

Albert W. Whitney, General Manager, National Workmen's Compensation Service Bureau.

LOCAL COMMITTEE ON ARRANGEMENTS.

HENRY J. HARRIS, *Chairman, Chief, Document Division, Library of Congress.*

ETHELBERT STEWART, *Chief Statistician, Bureau of Labor Statistics, Department of Labor.*

WALTER S. UFFORD, *Secretary, Associated Charities, District of Columbia.*

CHAS. H. VERRILL, *Editor, Bureau of Labor Statistics, Department of Labor.*

ERNEST P. BICKNELL, *Director General, Department of Civilian Relief, American National Red Cross.*

HERBERT D. BROWN, *Chief, United States Bureau of Efficiency.*

JOHN JOY EDSON, *President, Board of Charities, District of Columbia.*

MRS. ARCHIBALD HOPKINS, *Chairman, District of Columbia Section of the Woman's Department, National Civic Federation.*

MISS JULIA C. LATHROP, *Chief, Children's Bureau, Department of Labor.*

CHARLES F. NESBIT, *Superintendent of Insurance, District of Columbia.*

MISS HELEN L. SUMNER, *Assistant Chief, Children's Bureau, Department of Labor.*

BENJAMIN S. WARREN, *Surgeon, Public Health Service.*

GEORGE S. WILSON, *Secretary, Board of Charities, District of Columbia.*

HEADQUARTERS.

The conference headquarters and registration office will be on the tenth floor of the Hotel Raleigh, Pennsylvania Avenue and Twelfth

Street NW. The office will be open from 9 a. m. to 8 p. m. Members and others attending the conference are requested to register as soon as possible after arrival.

HOTELS.

Members should reserve hotel accommodations as early as possible. This is imperative, because several conventions will be in session in Washington at the time of the conference. Requests for reservations should be addressed directly to the manager of the hotel selected.

A selected list of boarding houses and smaller hotels will be on file at the registration office. The city, congressional, and other directories will also be available. Mail and telegrams, however, should be directed in the care of the hotel at which members are stopping.

TRANSPORTATION.

All trains arrive at the Union Station, where street cars may be taken which will pass directly by the principal hotels. The car starter at the station will give directions as to the best way of reaching the hotels.

TENTATIVE PROGRAM.

WORKMEN'S COMPENSATION.

Tuesday, December 5.

10 A. M.

Chairman, DUDLEY M. HOLMAN,
President I. A. I. A. B. C.

I. Merits and demerits of different forms of administration:
  1. The industrial commission system........................J. D. Beck
     Chairman, Industrial Commission of Wisconsin.
  2. The industrial accident board system.............Frank J. Donahue
     Chairman, Industrial Accident Board of Massachusetts.
  3. The district system..............................George B. Chandler
     Member, Workmen's Compensation Commission of Connecticut.
  4. The Pennsylvania system........................Harry A. Mackey
     Chairman, Workmen's Compensation Board of Pennsylvania.
  5. The Canadian system...........................George A. Kingston
     Commissioner, Workmen's Compensation Board of Ontario.

Discussion...Wallace D. Yaple
Chairman, Industrial Commission of Ohio.

2 P. M.

Chairman, J. D. BECK,
Chairman, Industrial Commission of Wisconsin.

II. Merits and demerits of different methods of carrying workmen's compensation insurance:
  1. Casualty companies—
     J. Scofield Rowe, Vice President, Aetna Life Insurance Co.,
     Edson S. Lott, President, United States Casualty Co.

2. Self insurance--Dudley Kennedy
Director of labor department, B. F. Goodrich Co., Akron, Ohio.
3. Employers' mutual associations--------------------Walter S. Bucklin
President, Massachusetts Employees' Insurance Association.
4. Competitive State funds---------------------------F. Spencer Baldwin
Manager, New York State Insurance Fund.
5. State monopoly:
T. J. Duffy, Member, Industrial Commission of Ohio.
*William A. Marshall, Chairman, Industrial Accident Commission of Oregon.
*E. W. Olson, Chairman, Industrial Insurance Commission of Washington.
6. Shortcomings of competitive plan of State insurance in workmen's compensation ---W. W. Greene
Actuary, Industrial Commission of Colorado.

Discussion:
C. H. Crownhart, former Chairman, Industrial Commission of Wisconsin.
A. L. Allen, Assistant Manager, Pennsylvania Workmen's Insurance Fund.

8 P. M.

Chairman, GEORGE A. KINGSTON,
Commissioner, Workmen's Compensation Board of Ontario.

III. Compensation schedules of awards:
A. J. Pillsbury, Chairman, Industrial Accident Commission of California.
P. Tecumseh Sherman, Attorney, New York, N. Y.
Albert W. Whitney, General Manager, National Workmen's Compensation Service Bureau.
Discussion--S. Herbert Wolfe
Consulting Actuary, New York, N. Y.

IV. Lump-sum settlements:
William C. Archer, Deputy Commissioner, New York State Bureau of Workmen's Compensation.
* Robert E. Grandfield, Secretary, Industrial Accident Board of Massachusetts.
Discussion.

Wednesday, December 6.

9.30 A. M.

Chairman, FRANK J. DONAHUE,
Chairman, Massachusetts Industrial Accident Board.

V. Basic principles of rate making:
Walter G. Cowles, Vice President, Travelers' Insurance Co.
Leon W. Senior, Manager, New York Compensation Rating Board.
"Experience" or "morale" rating as compared with merit rating, David S. Beyer, Massachusetts Employees' Insurance Association.
Discussion.

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* To be read by title.

VI. Accident prevention in connection with workmen's compensation:

Will J. French, Member, Industrial Accident Commission of California.

H. M. Wilson, Department of Inspection and Safety, The Associated Companies, Pittsburgh, Pa.

Discussion:

Victor T. Noonan, Director of Safety, Industrial Commission of Ohio.

Lewis T. Bryant, Commissioner of Labor, New Jersey.

2 P. M.

Chairman, Hon. WILLIAM B. WILSON,
Secretary of Labor.

VII. Medical services and medical and hospital fees under workmen's compensation:

F. M. Williams, Chairman, Workmen's Compensation Commission of Connecticut.

Dr. Francis D. Donoghue, Medical Adviser, Industrial Accident Board of Massachusetts.

VIII. Physical examination and medical supervision of employees:

J. P. White, President, United Mine Workers of America.

Dr. W. Irving Clark, Norton Co., Worcester, Mass.

Dr. W. H. White, Chief Medical Examiner, Industrial Commission of Ohio.

Discussion——Surg. J. W. Schereschewsky
United States Public Health Service.

IX. Permanently disabled workers:

The problem of the handicapped man——Dudley M. Holman
President I. A. I. A. B. C.

Discussion——Fred C. Croxton
Ohio Institute for Public Efficiency.

8 P. M.

Chairman, F. M. WILLIAMS,
Workmen's Compensation Commission of Connecticut.

X. Defects and suggested changes in workmen's compensation laws:

1. Railroad employees.
2. Excluded employments.
    (1) Agriculture.
    (2) Domestic service.
    (3) Nonhazardous employments.
    (4) Numerical exemptions.
3. Waiting time.
4. Permanent disabilities.

Prof. Willard C. Fisher, New York University.

Discussion:

Prof. John R. Commons, University of Wisconsin.

W. S. Carter, President, Brotherhood of Locomotive Firemen and Enginemen.

F. H. Bohlen, Attorney, Pennsylvania Department of Labor and Industry.

XI. Occupational diseases:

Frederick L. Hoffman, Statistician, Prudential Insurance Co.

Dr. George E. Tucker, Riverside (Cal.) Portland Cement Works.

SICKNESS (HEALTH) BENEFITS AND INSURANCE.

Thursday, December 7.

9.30 A. M.

Chairman, Dr. WILLIAM J. KERBY,
Professor of Sociology, Catholic University.

I. Existing agencies..Edgar Sydenstricker
United States Public Health Service.

1. Trade-unions—
   George W. Perkins, President, Cigarmakers' International Union.
   John P. Frey, Editor, International Molders' Journal.
2. Establishment funds—
   *George A. Ranney, International Harvester Co.
   E. B. Hunt, Pennsylvania Railroad Co.
3. Mutual-benefit funds..Abb Landis
   National Fraternal Congress.
4. Health insurance—
   Rufus M. Potts, Insurance Superintendent of Illinois.
   W. G. Curtis, President, National Casualty Co.

Discussion.

2 P. M.

Chairman, Dr. CHARLES P. NEILL,
Manager, Bureau of Information, Southeastern Railways.

II. Proposed legislation for sickness (health) insurance.
Dr. John B. Andrews, Secretary, American Association for Labor Legislation.

III. Some problems of sickness insurance for women..........Mary Van Kleeck
Russell Sage Foundation.

IV. How should the State deal with existing systems of sickness (health) insurance?..Lee K. Frankel
Sixth Vice President, Metropolitan Life Insurance Co.

Discussion:
Paul Scharrenberg, Secretary, California Federation of Labor.
Prof. J. P. Chamberlain, Columbia University.
Mrs. Florence Kelley, General Secretary, National Consumers' League.

8 P. M.

Chairman, HARRY A. MACKEY,
Chairman, Workmen's Compensation Board of Pennsylvania.

V. Medical benefits (services) under proposed sickness (health) insurance legislation.
Dr. Michael M. Davis, Director, Boston Free Dispensary.

Discussion:
Dr. Richard C. Cabot, Harvard Medical School, Cambridge, Mass.

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* To be read by title.

INVALIDITY AND OLD AGE INSURANCE, PENSIONS, AND RETIREMENT ALLOWANCES.

Friday, December 8.

9.30 A. M.

Chairman, Dr. EDWARD T. DEVINE,
Columbia University.

I. Existing agencies:
  1. Public employees..................................Herbert D. Brown
    Chief, United States Efficiency Bureau, Washington, D. C.
  2. Trade-union benefit funds..........................Marsden G. Scott
    President, International Typographical Union.
  3. Transportation and other private employers—
    Miles M. Dawson, Consulting Actuary, New York, N. Y.
    *J. B. Erskine, Manager, United States Steel and Carnegie Pension Fund.
  Discussion...Wm. Green
    Secretary-Treasurer, United Mine Workers of America.
II. Compulsory invalidity and old-age insurance, pensions, and retirement allowances....................................Magnus W. Alexander
    General Electric Co.
  Discussion.

SOCIAL INSURANCE APPLYING ESPECIALLY TO WOMEN.

2 P. M.

Chairman, ERNEST P. BICKNELL,
Director of Civilian Relief, American Red Cross.

I. Mothers' pensions:
  1. The theory of mothers' pension legislation......Sherman C. Kingsley
    City Club, Chicago, Ill.
  2. Experiences in administration:
    Mrs. H. Otto Wittpen, President, New Jersey State Board of Children's Guardians.
    William H. Matthews, Director, New York Department of Family Welfare.
    Judge E. E. Porterfield, Juvenile Court, Kansas City, Mo.
  Discussion.......................................Mrs. Davis R. Dewey
    Member, Massachusetts Board of Labor and Industry.
II. Maternity benefits..................................Dr. Henry J. Harris
    Library of Congress, Washington, D. C.
  Discussion.

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* To be read by title.

8 P. M.

Chairman, Dudley M. Holman,
President, I. A. I. A. B. C.

Address by President Woodrow Wilson.
Address by Hon. William B. Wilson, Secretary of Labor.
Address by Samuel Gompers, President, American Federation of Labor.

Saturday, December 9.

9.30 A. M.

Chairman, Wallace D. Yaple,
Chairman, Industrial Commission of Ohio.

I. Unemployment insurance:
  Bruno Lasker, Assistant Secretary, Mayor's Committee on Unemployment, New York City.
  Miss Olga Halsey, American Association for Labor Legislation.
II. Group insurance--William A. Day
  President, Equitable Life Assurance Society.
III. Massachusetts savings bank life insurance system--------Miss A. H. Grady
  Financial Secretary, Massachusetts Savings Insurance League.
Discussion.

REPORT OF WORKMEN'S COMPENSATION COMMITTEE OF BRITISH COLUMBIA.[1]

A committee was appointed on September 27, 1915, for the purpose of investigating in the United States and eastern Canada, on behalf of the Government of British Columbia, "the operations of modern systems of workmen's compensation laws." This committee made its report on March 1, 1916, after having visited the States of Washington, Oregon, California, Wisconsin, Ohio, New York, and Massachusetts, and the Provinces of Ontario and Nova Scotia. A number of hearings were held and much evidence was taken, in addition to interviews had with the members and officials of the commissions or boards charged with the administration of the compensation laws in the several States visited. Hearings were also held at Vancouver, B. C.

It is interesting to note that prior to 1914 a number of the Canadian Provinces had compensation laws, the type and method of the law being clearly modeled after the British pattern. In 1914, however, the Province of Ontario passed a law much more closely resembling the legislation of the United States on this subject, Nova Scotia following in 1915. It is this fact that gives significance to the visits of this committee to these two Provinces only. The report of the committee of British Columbia is very brief and compact, being printed on some 18 or 20 quarto pages.

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[1] British Columbia. Report of the Committee of Investigation on Workmen's Compensation Laws. Victoria, B. C., 1916. 21 pp.

The first item taken up is that of the exceptions in the treatment of railway industries found in the Ontario law, that law having retained for such industries the principle of individual liability as distinct from the main system provided for compensation of injured employees in industry generally. It was noted that the later law of Nova Scotia rejected this distinction, and this step was approved by the present committee, both because of the resultant uniformity and the belief, based on its own investigations both in Ontario and in the States visited, "that any such departure from the general principle adopted by the bill would sooner or later lead to unsatisfactory results." The railroads were found to be willing to accept the same treatment as other industries, provided there should be a schedule classification for the determination of premium rates that would allow the better equipped and inspected roads such advantages as might accrue to them from these facts.

Considerable emphasis is placed upon the importance of medical aid. The 1915 legislature of British Columbia had had before it the draft of a bill based on the provisions of the Ontario act, which was in turn largely an adaptation of the statute of the State of Washington. Of this it was said that after four years' experience "both employers and employees concur in saying that it has, with one exception, generally proved to be a most satisfactory piece of legislation." That exception is the omission of any medical-aid provision as such, said to be due to disagreement between employers and labor interests as to satisfactory terms. The laws of the Provinces visited are likewise defective, but all the States, except Washington, to which the commission went "have medical-aid provisions, most of them very adequate provisions, and operating with a great degree of satisfaction both to employers and workmen. * * * It was everywhere impressed upon the minds of the members of the committee the very great value of this service," chiefly by way of preventing trifling injuries from developing into serious disabilities and infections, even resulting in the amputation of members. The committee therefore recommended medical, surgical, and hospital treatment without limitation, but directed that employers retain 1 cent per working day from the wages of all employees as a contribution to the cost of this service. Coupled with this provision is one for a waiting period of three days for which no compensation is to be paid at any time, though medical benefits are to be paid in all cases from the time of the accident. As to the length of this waiting period it was said that "Experience covering a large number of cases in different countries has shown that only about 30 per cent of all accidents result in a disability of over 14 days. It is thus quite apparent to anyone who considers this fact that a waiting period of two weeks, or even of seven days, withholds a very large amount of money in the aggregate from injured workmen and must result in a distinct hardship to the lower-waged workmen." The committee also rejected the method of the two-week waiting period, compensating for the full time if the disability extends beyond the fourteenth day. Great satisfaction was expressed on account of the unanimity with which the recommendations of the committee on these points were approved by representatives of employers and workmen.

The next item taken up by the report is the subject of safety and accident prevention. It was felt that this subject should be given a very prominent place as an essential element in an adequate compensation system, in order that conditions may be brought about which would tend to the reduction of industrial accidents. "Laws which provide for the taxation of industry to furnish compensation for the victims of industrial accidents irrespective of fault are commendable and desirable, but laws which will prevent the happening of such accidents are of more vital importance." The system that met the most cordial approval of the committee was that in use in the State of Wisconsin, by which a commission charged with the administration of the workmen's compensation law also has power to make safety orders or accident-prevention rules and see that they are carried into practice. It was recommended therefore that the administrative commission for the proposed compensation act be granted similar authority, centralizing inspection and accident-prevention work with the beneficial activities of relief work.

The subject most fully discussed in the report is that of insurance, and specifically the question of "State-administered insurance versus casualty companies." "For the purpose of ascertaining at first hand the actual experience on this subject which might be helpful in forming a correct conclusion, we not only visited States having an exclusive State insurance fund, but included in our investigations States where the law as enacted gave casualty insurance companies a free field, as well as States where these companies have been permitted to operate in competition with the State insurance fund, or in competition with mutual companies which have been encouraged or fostered more or less by the State." The exclusive State insurance system of Washington "has been in operation four years, and the total cost of its administration has averaged 7.8 per cent of the total contributions. We found that representative employers and the representatives of organized labor in Washington concur in expressing satisfaction with this system of administration." The reason for the failure of other States to accept this method of insurance was found largely to be "in the strenuous opposition of casualty insurance companies," which "by bringing their enormous influence to bear succeeded in most instances in preventing the enactment of an exclusive law." In Ohio it was found that the operation of the State fund was practically exclusive, while the efforts of the stock companies to secure a wider range of activities were "unanimously opposed by the Ohio Manufacturers' Association and by the representatives of organized labor before the Ohio Legislature, and the insurance companies failed to secure the amendment of the law. * * * The rates of premium under the State fund are only about one-third as much as those charged by the casualty companies in their Ohio manual of rates. * * * The representatives of organized labor who appeared before us in Ohio stated that the satisfaction to them of the operation of the present system is a marked contrast to their experience when casualty companies were an active element in the industrial system. In view of these facts, the joint and vigorous opposition of employers and employees to the proposed amendment of the Ohio law is readily understood."

The experience under the elective law of Oregon was likewise held to be an ample justification of the method of State-administered insurance. "In comparing this experience with that of the State of Wisconsin, where free competition of insurance companies is permitted, we are told that it cost Wisconsin employers insuring in stock companies in 1914 an average of $2.07 to place $1 of benefits in the hands of injured workmen, while in Oregon it only cost $1.13; a total saving on the year's business in Oregon of $351,522.44 as compared with the Wisconsin method."

It was said that "in California, where the competition of casualty insurance companies with the State fund has been encouraged rather than otherwise," it had been found that this competition saddled a great amount of expense on the business, and ultimately on the employer.

The Wisconsin statute made no provision for a State-administered system, but competition with the stock companies is offered by the mutual insurance companies of the State. On the enactment of the compensation law in 1911, the stock companies "advanced their rates for compensation insurance on an average more than two and a half times those of the 'liability' insurance for employers who rejected the act," the statute being elective in form. The report states that "Out of every dollar contributed to mutual insurance in Wisconsin

75 cents goes to the injured workman, while in the stock companies only 48 cents of every dollar paid by the employer reaches the workman, the balance being consumed in acquisition costs, overhead expenses, and profits to shareholders. * * * If the premiums at present paid by employers in Wisconsin were administered at an expense not exceeding the average of the exclusive State funds, the workmen would receive $22.50 for every $12.59 he gets now. The element of private profit in this branch of insurance has been found in Wisconsin to be not only an economic evil, but an obstruction also to the proper administration of the law."

The committee considered also the State insurance fund of New York and the Massachusetts Employees' Insurance Association, both of which are operated in competition with stock companies. The chairman of the committee summed up the results of the investigation in the following language: "I believe that the ultimate solution of the troubles and evils of compensation insurance is for the State to take over the business, either directly through a State fund or indirectly by participating membership in a company like the Massachusetts Employees' Insurance Association." The committee was therefore unanimous in its recommendation for an exclusive State-administered fund. "Such a system would in our opinion not only save the employers of this Province an immense amount of money, but would contribute greatly to the success of the act as a whole by eliminating many undesirable features usually attendant on the competitive company system."

The next subject discussed is that of the scale of compensation, which the committee felt must be adequate to support dependents in the Province without allowing them to become objects of charity. The committee recommended a flat-rate scale for death benefits and that "a minimum be fixed of at least $5 per week payable to workmen who are totally disabled." It also recommended that provision for compensation for industrial diseases be made on the basis of the provisions of the English Workmen's Compensation Act.

An administrative commission or board was strongly recommended for the sake of competent and economical administration, and for these reasons also a continuing body with long individual terms of service was urged. The term of service recommended was 10 years, appointments being arranged so that at least two experienced members should be on the board. It may be noted that in Nova Scotia and Ontario appointments are for service during good behavior, subject to the provision that members retire automatically on reaching the age of 75 years. These extended terms of service naturally provide for continuity of policy and the development of experienced administration—a suggestive fact, especially in view of the statement by the Louisiana commission (1914) to the effect that it "has not thought it safe to advise the adoption of any State insurance, for the reason that the intricacies of insurance business require a permanence of management and a degree of skill inconsistent with the changes inherently a part of our political system."

Brief attention was given to the question of placing the cost of administration. The employers were practically unanimous in asking that this be paid by the Government from the consolidated revenue fund of the Province, the only opposition noted being that of the insurance companies. It was stated that throughout the United States administrative costs were generally paid by the State, and in view of the widely distributed benefits anticipated, it was recommended "that a substantial portion of the cost of administration be assumed by the Government." The law as enacted authorizes annual appropriations as directed by the lieutenant governor in council in amounts not exceeding $50,000 as a contribution to administration costs.

Other matters of subordinate interest are discussed, of which perhaps but one need be noted; that is, the recommendation that no right of appeal to the courts be allowed from the rulings of the workmen's compensation board. It was thought that while a limited appeal would probably result in no serious disadvantage the committee was "equally convinced from a consideration of the evidence before us that an appeal is not necessary for the proper administration of the act."

The bill which received approval as a law on May 31, 1916, was in substantial accord with the recommendations of the committee.

WORKMEN'S COMPENSATION LAW OF BRITISH COLUMBIA, 1916.

As stated in the foregoing report of the activities and conclusions of the investigative commission, the legislature of British Columbia enacted a law, approved May 31, 1916, establishing a "modern system" of compensation for the Province. The act provides that it shall be in effect January 1, 1917.

An earlier act, bearing date of June 21, 1902, was repealed. This act was on the well-known pattern of the British law, of rather restricted application, and limiting payments to a sum equal to three years' earnings in case of death, while weekly payments for disability were not to exceed an aggregate of $1,500. The present act resembles the statute of Ontario in following quite closely the law of the State of Washington in a number of important features. It departs from the Washington statute, however, in providing medical benefits, and incorporates also the safety and accident-prevention provisions which were specially impressed upon the commission during its visit to Wisconsin. The act is of very general inclusiveness, is compulsory in form, and requires all employers affected by it to insure in a provincial accident fund.

That the Province proposes to make its system of compensation entirely complete within itself is further evidenced by the fact that the entire determination of disputes is vested in the board provided for by the act, without any appeal whatever to the courts. A three days' waiting time is provided, for which no payment is to be allowed at any time, industrial diseases are compensated for, classifications of industries are made by the act, with authority in the board to create new classes, determine assessments, modify rates, make special assessments in case of deficit, etc. The entire cost of compensation is on the employer, but he is required to deduct from the wages of his employees 1 cent for each day's work, this amount to go to the medical-aid fund.

Death benefits are in fixed monthly sums, $20 for a widow or invalid widower and $5 each for children under 16 years of age, the total not to exceed $40. Orphan children receive $10 each, with the same limitation as to the total. Other dependents are also provided for, either in connection with the foregoing or standing alone, but no monthly aggregate may exceed $40. Total disability is compensated during its continuance by the payment of 55 per cent of the workman's earnings, but not less than $5 per week, unless the earnings were less, when the compensation shall equal the amount of the earnings. Partial disability is compensated on the basis of the wage loss. Payments to a widow or invalid widower cease on remarriage, the former being entitled to two years' benefits as a lump-sum payment. Payments to children cease on their attaining the age of 16 years, except in case of invalidity.

The board of three members is to be appointed for terms of 10 years, and has power to inspect premises, determine upon safety devices and methods, make rules and regulations, establish safety museums, etc.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, SEPTEMBER 16 TO OCTOBER 15, 1916.

The organic act of the Department gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation. During the month September 16 to October 15, 1916, the Secretary exercised his good offices in nine labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, SEPT. 16 TO OCT. 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike of pottery workers, East Liverpool, Ohio			Pending.
Controversy, miners and smelters, Ducktown, Tenn			Do.
Strike of machinists, 5 shops, Greenfield, Mass	734	1,200	Adjusted.
Strike of cigar makers, Detroit, Mich	6,000	500	Pending.
Strike of pattern makers, Detroit, Mich	263	50	Do.
Strike, Alva Carpet Mills, Philadelphia	98		Do.
Strike of metal polishers, Colts Fire Arms Co., Hartford, Conn. (reopened)			Do.
Lockout, Southern Saddlery Co., Chattanooga, Tenn	45		Do.
Threatened strike of shopmen, New York, Ontario & Western R. R., Middletown, N. Y.			

Cases noted as pending in statement of September 15 have been disposed of as follows:

Controversy between the Cincinnati, Indianapolis & Western Railway and the Brotherhood of Railway Carmen, Cincinnati, Ohio; adjusted.

Textile controversy, Shamokin, Pa.; adjusted.

Lockout of freight handlers, Chicago, Ill.; adjusted.

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT BUREAUS IN CANADA.

In the following table data are presented for September, 1915, and September, 1916, relative to the operations of public employment offices. Information is furnished for the United States for State employment bureaus in 14 States, municipal employment bureaus in 7 States, a State-city employment bureau in 1 State, and a city-private employment bureau in 1 State. Data are also furnished for 2 Canadian provincial employment bureaus.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, SEPTEMBER, 1915 AND 1916.

UNITED STATES.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
California (municipal):						
Berkeley—						
September, 1915	139	166	85	445	166	166
September, 1916	187	207	57	287	198	198
Sacramento—						
September, 1915	(1)	342	78	(1)	342	342
September, 1916	(1)	332	67	(1)	332	332
California (State):						
Oakland—						
September, 1916	846	1,285	536	(1)	1,121	801
Sacramento—						
September, 1916	655	1,583	944	(1)	1,450	1,322
San Francisco—						
September, 1916	1,513	3,735	2,764	(1)	3,207	2,572
Total:						
September, 1915					508	508
September, 1916					[2] 6,308	[2] 5,225
Connecticut (State):						
Bridgeport—						
September, 1915	448	(1)	(1)	(1)	(1)	417
September, 1916	973	(1)	(1)	(1)	(1)	852
Hartford—						
September, 1915	644	(1)	(1)	(1)	(1)	508
September, 1916	941	(1)	(1)	(1)	(1)	725
New Haven—						
September, 1915	478	(1)	(1)	(1)	(1)	357
September, 1916	918	(1)	(1)	(1)	(1)	765
Norwich—						
September, 1915	119	(1)	(1)	(1)	(1)	105
September, 1916	217	(1)	(1)	(1)	(1)	202
Waterbury—						
September, 1915	214	(1)	(1)	(1)	(1)	154
September, 1916	207	(1)	(1)	(1)	(1)	146
Total:						
September, 1915						1,541
September, 1916						2,690
Colorado (State):						
Colorado Springs—						
September, 1915	(1)	857	(1)	(1)	(1)	803
September, 1916	(1)	656	610	(1)	582	(1)
Denver No. 1—						
September, 1915	(1)	[3] 90	(1)	(1)	(1)	302
September, 1916	(1)	612	410	(1)	385	(1)
Denver No. 2—						
September, 1915	(1)	254	(1)	(1)	(1)	212
September, 1916	(1)	462	370	(1)	263	(1)
Pueblo—						
September, 1915	(1)	260	(1)	(1)	(1)	203
September, 1916	(1)	983	944	(1)	862	(1)
Total:						
September, 1915					(1)	1,520
September, 1916					2,092	(1)
Illinois (municipal):						
Chicago—						
September, 1916	18	580	900	(1)	580	232
Indiana (State):						
Evansville—						
September, 1915	161	161	80	42	200	161
September, 1916	453	453	90	40	502	453
Fort Wayne—						
September, 1915	288	468	374	81	455	447
September, 1916	359	520	380	43	420	381
South Bend—						
September, 1915	211	457	598	91	401	367
September, 1916	237	767	349	43	361	311
Total:						
September, 1915					1,056	975
September, 1916					1,283	1,145

[1] Not reported.
[2] Including data for State employment offices, which were not established until January, 1916.
[3] Not reported for males.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, SEPTEMBER, 1915 AND 1916—Contd.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Iowa (State):						
Des Moines—						
September, 1916	36	220	114	37	123	93
Kansas (State):						
Topeka—						
September, 1915	15	16	12	8	18	13
September, 1916	32	35	35	3	36	27
Kentucky (city-private):						
Louisville—						
September, 1915	(1)	132	595	1,057	186	109
September, 1916	(1)	290	373	595	243	109
Kentucky (State):						
Louisville—						
September, 1915	113	113	324	....	113	113
September, 1916	737	737	904	....	737	737
Total:						
September, 1915	....	....	....	....	299	222
September, 1916	....	....	....	....	980	846
Massachusetts (State):						
Boston—						
September, 1915	1,910	2,275	[2] 1,240	(1)	[3] 3,706	1,663
September, 1916	2,543	2,783	[2] 1,259	(1)	[3] 3,519	1,450
Fall River—						
September, 1915	91	93	[2] 12	(1)	[3] 78	67
September, 1916	136	146	[2] 18	(1)	[3] 116	107
Springfield—						
September, 1915	809	1,052	[2] 481	(1)	[3] 1,391	884
September, 1916	1,182	1,601	[2] 691	(1)	[3] 1,824	1,135
Worcester—						
September, 1915	752	929	[2] 537	(1)	[3] 1,150	655
September, 1916	1,064	1,419	[2] 594	(1)	[3] 1,443	744
Total:						
September, 1915	....	....	....	....	[3] 6,325	3,269
September, 1916	....	....	....	....	[3] 6,902	3,436
Michigan (State):						
Battle Creek—						
September, 1916	78	228	[4] 146	(1)	135	135
Bay City—						
September, 1916	43	163	[4] 81	(1)	81	81
Detroit—						
September, 1915	(1)	(1)	(1)	(1)	(1)	3,620
September, 1916	602	5,216	[4] 5,549	(1)	4,680	4,680
Flint—						
September, 1915	(1)	(1)	(1)	(1)	(1)	398
September, 1916	404	806	[4] 778	(1)	778	778
Grand Rapids—						
September, 1915	(1)	(1)	[4] 884	(1)	(1)	867
September, 1916	457	993	[4] 874	(1)	852	852
Jackson—						
September, 1915	(1)	(1)	[4] 612	(1)	(1)	564
September, 1916	396	898	[4] 768	(1)	755	749
Kalamazoo—						
September, 1915	(1)	(1)	[4] 398	(1)	(1)	398
September, 1916	350	514	[4] 490	(1)	490	490
Lansing—						
September, 1916	69	270	[4] 233	(1)	217	217
Muskegon—						
September, 1916	64	285	[4] 214	(1)	212	201
Saginaw—						
September, 1915	(1)	(1)	[4] 761	(1)	(1)	761
September, 1916	171	1,012	[4] 741	(1)	741	741
Total:						
September, 1915	....	....	....	....	(1)	6,608
September, 1916	....	....	....	....	8,941	8,924

[1] Not reported.

[2] Number who were registered.

[3] Number of offers of positions.

[4] Number applying for work.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, SEPTEMBER, 1915 AND 1916—Contd.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Minnesota (State):						
Duluth—						
September, 1915	(1)	(1)	(1)	(1)	(1)	1,029
September, 1916	(1)	(1)	(1)	(1)	(1)	1,241
Minneapolis—						
September, 1915	(1)	(1)	(1)	(1)	(1)	2,369
September, 1916	(1)	(1)	(1)	(1)	(1)	2,060
St. Paul—						
September, 1915	(1)	(1)	(1)	(1)	(1)	1,188
September, 1916	(1)	(1)	(1)	(1)	(1)	1,246
Total:						
September, 1915	(1)	(1)	(1)	(1)	(1)	4,586
September, 1916	(1)	(1)	(1)	(1)	(1)	4,547
Montana (municipal):						
Butte—						
September, 1915	250	336	513	(1)	300	282
September, 1916	300	374	560	(1)	340	298
New York (municipal):						
New York City—						
September, 1915	700	944	1,996	(1)	1,665	715
September, 1916	2,167	2,530	2,163	(1)	3,486	2,053
New York (State):						
Albany—						
September, 1915	246	336	605	198	477	258
September, 1916	597	864	536	277	790	435
Brooklyn—						
September, 1915	663	1,149	1,935	669	1,449	691
September, 1916	1,335	1,911	1,081	504	2,025	1,185
Buffalo—						
September, 1915	531	757	754	192	778	569
September, 1916	982	1,966	1,264	72	1,831	1,421
Rochester—						
September, 1915	822	1,806	1,093	164	1,371	918
September, 1916	1,058	1,681	890	343	1,550	980
Syracuse—						
September, 1915	553	740	841	108	843	594
September, 1916	1,038	1,420	713	145	1,146	734
Total:						
September, 1915					6,583	3,745
September, 1916					10,828	6,808
Ohio (State-city):						
Akron—						
September, 1915	(1)	1,803	1,388	1,797	1,649	1,314
September, 1916	(1)	1,853	772	1,269	1,574	1,359
Cincinnati—						
September, 1915	(1)	1,487	2,106	3,296	1,589	1,339
September, 1916	(1)	1,840	1,317	2,434	1,743	952
Cleveland—						
September, 1915	(1)	6,986	2,964	6,311	5,165	4,373
September, 1916	(1)	7,928	2,344	6,744	6,694	5,374
Columbus—						
September, 1915	(1)	1,951	977	2,354	1,900	1,673
September, 1916	(1)	2,612	924	2,060	2,155	1,839
Dayton—						
September, 1915	(1)	1,189	921	1,286	984	925
September, 1916	(1)	1,182	670	1,006	908	822
Toledo—						
September, 1915	(1)	4,001	2,797	1,202	3,360	3,068
September, 1916	(1)	4,338	1,362	1,754	2,431	2,016
Youngstown—						
September, 1915	(1)	1,107	878	927	1,061	863
September, 1916	(1)	1,185	584	1,052	1,141	957
Total:						
September, 1915					15,708	13,555
September, 1916					16,646	13,319

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(1) Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, SEPTEMBER, 1915 AND 1916—Contd.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Oklahoma (State):						
Enid—						
September, 1915	(1)	286	255	(1)	(1)	238
September, 1916	(1)	119	135	(1)	(1)	109
Muskogee—						
September, 1915	(1)	163	159	(1)	(1)	122
September, 1916	(1)	336	187	(1)	(1)	153
Oklahoma City—						
September, 1915	(1)	388	406	(1)	(1)	287
September, 1916	(1)	839	515	(1)	(1)	451
Tulsa—						
September, 1915	(1)	260	264	(1)	(1)	209
September, 1916	(1)	850	658	(1)	(1)	658
Total:						
September, 1915	....	....	....	....	(1)	856
September, 1916	....	....	....	....	(1)	1,371
Oregon (municipal):						
Portland—						
September, 1916	(1)	5,177	84	(1)	(1)	3,214
Pennsylvania (State):						
Altoona—						
September, 1916	(1)	52	62	1	35	28
Harrisburg—						
September, 1916	(1)	356	216	94	226	176
Johnstown—						
September, 1916	(1)	178	57	14	63	47
Philadelphia—						
September, 1916	(1)	1,158	635	815	1,123	996
Pittsburgh—						
September, 1916	(1)	765	692	137	528	483
Total:						
September, 1916	....	....	....	....	1,975	1,730
Rhode Island (State):						
Providence—						
September, 1915	324	383	209	160	(1)	383
September, 1916	274	313	153	203	(1)	313
Texas (municipal):						
Dallas—						
September, 1915	201	(1)	110	(1)	(1)	443
September, 1916	236	630	53	6	642	606
Fort Worth—						
September, 1915	173	580	[2]1,311	(1)	740	405
September, 1916	227	834	442	27	427	400
Total:						
September, 1915	....	....	....	....	(1)	848
September, 1916	....	....	....	....	1,069	1,006
Virginia (municipal):						
Richmond—						
September, 1915	288	558	615	(1)	393	181
September, 1916	293	485	463	(1)	555	231
Washington (Federal-municipal):						
Tacoma[3]—						
Washington (municipal):						
Everett—						
September, 1915	(1)	(1)	(1)	(1)	(1)	199
September, 1916	672	(1)	(1)	(1)	(1)	459
Spokane—						
September, 1915	(1)	(1)	(1)	(1)	1,071	935
September, 1916	2,690	3,572	....	....	3,882	3,822
Total:						
September, 1915	....	....	....	....	(1)	1,134
September, 1916	....	....	....	....	(1)	4,281

[1] Not reported.

[2] Number applying for work.

[3] Figures for this office are carried regularly in the REVIEW under the subject "Federal employment work of the Department of Labor," to which the reader is referred.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, SEPTEMBER, 1915 AND 1916—Concld.

UNITED STATES—Concluded.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Wisconsin (State):						
La Crosse—						
September, 1915	122	187	[1] 320	(2)	145	64
September, 1916	149	219	[3] 179	(2)	152	74
Milwaukee—						
September, 1915	1,442	2,924	[1] 3,173	(2)	3,123	2,170
September, 1916	1,880	3,770	[3] 2,892	(2)	3,169	2,289
Oshkosh—						
September, 1915	153	217	[1] 316	(2)	210	116
September, 1916	165	249	[3] 157	(2)	151	90
Superior—						
September, 1915	493	720	[1] 743	(2)	711	449
September, 1916	391	1,116	[3] 943	(2)	926	604
Total:						
September, 1915					4,188	2,799
September, 1916					4,398	3,057

CANADIAN PROVINCIAL EMPLOYMENT BUREAUS.

Province and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Quebec (Province):						
Montreal—						
September, 1916	954	(2)	340	(2)	454	374
Quebec—						
September, 1915	(2)	101	233	(2)	(2)	63
September, 1916	(2)	291	117	(2)	(2)	84
Total:						
September, 1915					(2)	63
September, 1916					(2)	458

[1] Registrations. [2] Not reported. [3] Number applying for work.

EMPLOYMENT IN SELECTED INDUSTRIES IN SEPTEMBER, 1916.

For nearly a year the Bureau of Labor Statistics has been collecting and publishing in the MONTHLY REVIEW figures indicating the change in the volume of employment in the United States each month as compared with the same month a year before and with the preceding month.

Four tables containing data obtained by correspondence from representative manufacturing establishments in 10 industries are here given, 2 comparing the state of employment in September, 1915, and September, 1916, and 2 comparing August, 1916, and September, 1916.

As in the preceding months of this year, employment in the manufacturing industries as a whole in September was in a better state than in the corresponding month a year preceding. The following table shows that in 8 of the 10 industries listed the number of employees on the pay roll was greater in September, 1916, than in September, 1915. The industries showing a reduction in the number on the pay roll are cotton manufacturing and cigar manufacturing. The greatest increase shown (23.5 per cent) is for the iron and steel industry. The amount of money paid to employees was greater in September, 1916, than in September, 1915, in all of the 10 industries listed. The greatest increase shown is 50.4 per cent for the iron and steel industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN SEPTEMBER, 1915, AND SEPTEMBER, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for September, both years.	Period of pay roll.	Number on pay roll in September—		Per cent of increase (+) or decrease (−).	Amount of pay roll in September—		Per cent of increase (+) or decrease (−).
				1915	1916		1915	1916	
Boots and shoes	85	66	1 week	46,705	55,572	+19.0	$550,397	$709,840	+29.0
Cotton manufacturing	89	52	...do	53,097	52,459	− 1.2	459,103	519,717	+13.2
Cotton finishing	19	15	...do	10,392	11,078	+ 6.6	104,686	131,062	+25.2
Hosiery and underwear	82	55	...do	27,674	29,238	+ 5.7	232,791	283,542	+21.8
Woolen	56	43	...do	39,443	40,091	+ 1.6	389,509	481,301	+23.6
Silk	64	51	2 weeks	19,903	21,466	+ 7.8	393,688	472,049	+19.9
Men's ready-made clothing	83	31	1 week	18,366	21,323	+16.1	221,858	299,081	+34.8
Iron and steel	142	100	½ month	140,545	173,533	+23.5	4,435,177	6,669,870	+50.4
Car building and repairing	80	37	...do	48,840	57,912	+18.6	1,357,469	1,795,747	+32.3
Cigar manufacturing	107	54	1 week	19,182	18,486	− 3.0	190,030	214,814	+13.0

In the letter to the establishments asking for data an inquiry was included as to the number of employees that actually were at work on the last full day of the pay period reported, as distinguished from the number on the pay roll, that is, the number who worked the whole or some part of the pay period. Only a part of the firms reported this item, but the figures returned are here given. While the percentages of increase or decrease differ from those in the preceding table, in a general way they follow the same trend.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN SEPTEMBER, 1915, AND SEPTEMBER, 1916.

Industry.	Establishments reporting for September, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in September—		Per cent of increase (+) or decrease (−).
			1915	1916	
Boots and shoes	31	1 week	21,312	23,835	+11.8
Cotton manufacturing	34	...do	21,003	21,286	+ 1.3
Cotton finishing	10	...do	6,356	6,731	+ 5.9
Hosiery and underwear	13	...do	9,513	9,686	+ 1.8
Woolen	40	...do	30,175	30,652	+ 1.6
Silk	36	2 weeks	11,449	12,620	+10.2
Men's ready-made clothing	5	1 week	593	604	+ 1.9
Iron and steel	87	½ month	112,755	140,321	+24.4
Car building and repairing	35	...do	41,803	48,012	+14.9
Cigar manufacturing	34	1 week	10,023	9,580	− 4.4

Five of the 10 industries listed report an increase in the number of employees on the pay roll in September, 1916, over August, 1916, and 5 report a reduction. In the amount of money paid out to employees in wages an increase is shown for September over August, 1916, for all the industries except boot and shoe manufacturing, men's ready-made clothing, and car building and repairing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN AUGUST, 1916, AND SEPTEMBER, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for August and September.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
				August, 1916.	September, 1916.		August, 1916.	September, 1916.	
Boots and shoes	85	65	1 week	54,951	54,509	−0.8	$705,647	$704,861	−0.1
Cotton manufacturing	89	50	...do	50,863	50,722	− .3	496,607	506,552	+2.0
Cotton finishing	19	15	...do	11,174	11,078	− .9	128,811	131,062	+1.7
Hosiery and underwear	82	52	...do	27,572	28,030	+1.7	256,545	272,244	+6.1
Woolen	56	44	...do	38,971	40,411	+3.7	453,443	485,328	+7.0
Silk	64	48	2 weeks	21,734	21,637	− .4	479,117	480,517	+ .3
Men's ready-made clothing	83	32	1 week	21,674	21,347	−1.5	328,222	299,379	−8.8
Iron and steel	142	104	½ month	170,439	173,915	+2.0	6,360,915	6,624,769	+4.1
Car building and repairing	80	35	...do	54,082	54,644	+1.0	1,720,383	1,686,189	−2.0
Cigar manufacturing	107	53	1 week	18,074	18,225	+ .8	197,970	210,496	+6.3

In the table below an increase in the number of employees actually working on the last full day of the reported pay period in September, 1916, over August, 1916, is shown for half of the industries listed and a decline for the other five industries. The greatest reduction shown in this table is 7.5 per cent for the men's ready-made clothing industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN AUGUST, 1916, AND SEPTEMBER, 1916.

Industry.	Establishments reporting for August and September.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			August, 1916.	September, 1916.	
Boots and shoes	31	1 week	19,680	19,466	−1.1
Cotton manufacturing	30	....do	21,107	21,077	− .1
Cotton finishing	10	....do	6,735	6,731	− .1
Hosiery and underwear	14	....do	9,901	10,028	+1.3
Woolen	41	....do	29,674	30,949	+4.3
Silk	32	2 weeks	12,643	12,519	−1.0
Men's ready-made clothing	4	1 week	559	517	−7.5
Iron and steel	99	½ month	141,382	145,891	+3.2
Car building and repairing	33	....do	45,628	46,907	+2.8
Cigar manufacturing	34	1 week	8,679	9,154	+5.5

RECENT CHANGES IN WAGE RATES.

Inquiry was made on the volume of employment schedule sent to reporting establishments as to changes in wage rates for the period August 15, 1916, to September 15, 1916. In many instances no definite reply was received, and it is probably safe to assume in such cases that there was no change in the wage rates.

In the textile industries—cotton manufacturing, cotton finishing, hosiery and underwear, woolen and silk—as well as in the boot and shoe, car building and repairing, and clothing industries, wage rates are reported as practically stationary, there being only six increases reported from the establishments rendering reports in these industries. In the industry of cigar manufacturing, one establishment reports an increase of 10 per cent to half the force, while another reports an increase of 12 per cent to 65 per cent of the force. An increase of 12 per cent (on the average) to strippers is reported by one establishment in this industry.

The greatest number of increases in wage rates is reported for the iron and steel industry. One establishment in this industry reports an increase of 2½ per cent to three-fourths of the force. Three establishments report an increase of 3 per cent to from one-half to three-fourths of the force. One establishment reports an increase of 5 per cent, but does not specify the class of employees receiving such increase. An increase of 10 per cent is reported by three establishments; in one of these establishments the increase is given to all employees, in another to three-fourths of the force, and in the third to a small percentage of the employees.

EMPLOYMENT IN THE STATE OF NEW YORK IN SEPTEMBER, 1916.

A statement of the condition of employment in the State of New York in September, 1916, as issued by the New York State Industrial Commission, is here reproduced. The figures summarize returns to the commission from 1,500 representative firms, with over a half million employees, or one-third of the factory workers in the State, and a weekly pay roll of over $8,000,000.

More workers were employed and more wages were paid in New York State factories in September, 1916, than in any other month since these records have been kept, dating back to June, 1914. From August to September there was an increase of 4 per cent in number of employees and of 6 per cent in amount of wages.

The increase in the total number of employees in September, 1916, as compared with September, 1915, was 15 per cent, and as compared with September, 1914, was 21 per cent. Corresponding increases in amount of wages were 33 per cent and 45 per cent, respectively.

The average weekly earnings of the total number of employees in September, 1916, were $14.86, as compared with $14.46 in August, 1916, and $12.85 in September, 1915.

The stone, clay, and glass products group reported a 5 per cent increase in wages from August to September, thus establishing a new high record. There was a negligible increase in number of employees. The glass industry reported a marked increase both in number of employees and in wages. The group as a whole employed one-fifth more workers and paid out two-fifths more wages than in September, 1915.

The metals, machinery, and conveyances group reported in September 4 per cent more employees and 7 per cent more wages than in August, thus establishing a new high record for this group in both respects. Seven of the twelve industries in the group reported increases in employees. Two industries only reported decreases in wages, the others reporting substantial increases. One industry only—boat and shipbuilding—reported a decrease both in employees and wages. The most pronounced increases both in employees and wages were in the manufacture of firearms, tools, and cutlery, and in automobiles and parts. Other industries with increased wages of 10 per cent or more as compared with August were the manufacture of cooking, heating and ventilating apparatus, the manufacture of instruments and appliances, and railway rolling stock and repairs. The group as a whole employed a third more workers and paid out a half more wages than in September, 1915.

The wood manufactures group employed 12 per cent more workers and paid out 6 per cent more wages in September than in August, establishing a new high record in both respects. Each industry in the group reported increases both in workers and in wages, the increase in wages exceeding that number of workers in each industry. As compared with September of last year, the group as a whole employed one-tenth more workers and paid out one-fifth more wages.

In the furs, leather, and rubber goods group there was a recession of activity in September as compared with August, a decrease in both number of employees and in wages having been reported. The furs and fur goods industry reported one-tenth more workers and one-fifth more wages. The rubber goods industry likewise reported increases in both employees and wages. These increases, along with a wage increase in the pearl, horn, bone, etc., industry, were offset, however, by decreases in the other industries, notably the miscellaneous leather and canvas goods industry. As compared with September, 1915, the group as a whole employed one-sixth more workers and paid out one-third more wages.

The chemicals, oils, and paints group maintained the high level set in August for wages, but employed 2 per cent fewer workers. The drugs and chemicals industry reported a substantial increase in activity. There was a slight increase in the manufacture of animal and mineral oil products. These were offset, however, by decreases in paints, oils, and colors, and in miscellaneous chemical products. The group as a whole employed one-fifth more workers and paid out one-third more wages than in September, 1915.

There was a slight recession of activity in the paper-making industry in September as compared with August, a strike in one plant and delay in receiving pulp in another being contributing factors. The decrease in employees was 3 per cent and in wages 3 per cent. As compared with September one year ago, one-sixth more workers were employed and one-third more wages were paid.

The printing and paper goods group employed 2 per cent more workers and paid out 5 per cent more wages than in August, establishing new high levels in both respects. Each of the three industries in the group reported more workers and a larger aggregate of wages. As compared with September, 1915, one-tenth more workers were employed and one-sixth more wages paid in the group as a whole.

The textiles group employed 3 per cent more workers than in August and paid out 2 per cent more wages, establishing a new high level in the latter respect. Each of the industries in the group paid out more wages. Two of the industries—wood manufactures and the manufacture of cotton goods—employed slightly fewer workers. These decreases were more than counterbalanced, however, by increase in other industries, especially silk and silk goods and knit goods. As compared with September, 1915, one-twentieth more workers were employed and one-fifth more wages were paid.

The clothing, millinery, and laundering group reported an increase of 17 per cent in employees and of 19 per cent in wages as compared with August. Every industry in the group except two—men's clothing and laundering, cleaning and dyeing—reported large increases in both employees and wages. The advent of the busy season, coupled with the cessation of labor troubles and the ending of the vacation period account for the marked improvement. Increases of 81 per cent in wages paid out in men's shirts and furnishings, 34 per cent in women's clothing, and 37 per cent in millinery were the most striking. The group as a whole employed 7 per cent more workers and paid out 25 per cent more wages than in September, 1915.

The food, liquors, and tobacco industry reported 1 per cent decrease in employees and 2 per cent increase in wages in September as compared with August. Bakery products, beverages, and tobacco products reported decreases in employees and the latter two reported decreases in wages. Wage increases in excess of 10 per cent were reported by the flour, feed, and cereal industry; the canning and preserving industry; and the confectionery and ice cream industry. The group as a whole employed 1 per cent fewer workers and paid out 12 per cent more wages than in September, 1915.

The water, light, and power industry employed 10 per cent more workers and paid out 13 per cent more wages than in August, establishing a new high record for wages. As compared with September, 1915, the group as a whole employed one-eighth more workers and paid out one-fifth more wages.

Building activity in September, 1916, was 23 per cent less than in August, 1916, and 15 per cent less than in September, 1915. These figures are based on returns from the first and second class cities in New York State as to the estimated cost of building work (of which new buildings constituted four-fifths) for which permits were issued in the respective months. Each city, except Syracuse and Utica, reported a decrease as compared with August. As compared with September, 1915, however, only four cities—Albany, New York, Troy, and Yonkers—reported a decrease. Each of the remaining six cities reported a substantial increase.

STRIKES AND LOCKOUTS, JANUARY TO SEPTEMBER, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the first nine months of the year 1916 was 2,584. The number similarly compiled during the corresponding months of the year 1915 was 916.

The following table shows the number of strikes and lockouts begun in each of the months of 1916, together with 236 strikes and lockouts reported as having occurred during the nine-month period, although the month in which they began was not reported. The number of strikes compiled during the corresponding months of the year 1915 is also given. In comparing these figures it must be borne in mind that, although the number of strikes in 1916 has undoubtedly been larger than those in the corresponding months of 1915, the sources of the bureau in obtaining data in regard to strikes have also increased, and the difference between the two years is therefore not so great as the figures would tend to show. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO SEPTEMBER, INCLUSIVE, 1916 AND 1915.

Kind of dispute.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Month not stated.	Total.
Strikes:											
1916	150	156	218	319	497	258	258	254	155	221	2,486
1915	50	45	75	91	111	54	95	138	147	....	806
Lockouts:											
1916	8	5	8	13	16	16	2	6	9	15	98
1915	13	12	14	16	11	6	14	9	15	....	110
Total:											
1916	158	161	226	332	513	274	260	260	164	236	2,584
1915	63	57	89	107	122	60	109	147	162	....	916

The above columns include disputes that began in the month indicated only, and are subject to monthly revision. More detailed accounts of the disputes reported for each month preceding September may be found in former numbers of the Review.

DISPUTES REPORTED DURING SEPTEMBER, 1916.

The number of strikes reported during September shows a decrease from the number reported during the preceding six months. Probably the strike that attracted the most attention was that of the street railway men in New York City. Others of prominence were those of the miners in Pennsylvania, Indiana, Illinois, Kansas, Ohio, and

Texas; the machinists in St. Louis, Baltimore, and Connecticut; the molders in Toledo and Norristown, Pa.; the metal workers in Pittsfield, Mass., and New York City; the cooks and waiters in New York City and Rochester; the cigar makers in New York City, Detroit, Springfield, Mass., and Tampa, Fla.; the weavers in Fall River, the cotton mill workers in Charleston, and the hosiery workers in Philadelphia; the oil refiners in Philadelphia; the van movers in St. Louis; and the barbers, teamsters, milk drivers, grocery clerks, inside carpenters, and ferry boatmen in New York City.

The data in the following tables relate to 275 strikes and lockouts, concerning which information was received by the bureau during the month of September. These include, in addition to the 164 strikes and lockouts which began in September, 110 strikes and 1 lockout which were reported during September, but began as follows: 39 strikes in August, 7 strikes in July, 2 strikes in June, 2 strikes in May, 1 strike and 1 lockout in April, and 59 strikes the dates of commencement of which were not reported, but most of which probably occurred in August or September. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for September will show an increase over the number of strikes herein reported for that month.

Of the disputes reported during September, 27 strikes and 1 lockout occurred east of the Mississippi and south of the Ohio and Potomac Rivers, 32 strikes and 3 lockouts west of the Mississippi, and the remaining 206 strikes and 6 lockouts in the district north of the Ohio and Potomac Rivers and east of the Mississippi. About one-half of these strikes occurred in four States.

STATES IN WHICH 4 OR MORE STRIKES AND LOCKOUTS WERE REPORTED DURING SEPTEMBER, 1916.

State.	Strikes.	Lockouts.	Total.
Pennsylvania	47		47
New York	40	1	41
Massachusetts	30		30
Ohio	18	2	20
New Jersey	14		14
Connecticut	13	1	14
Illinois	13	1	14
Indiana	9		9
Michigan	7		7
Wisconsin	7		7
Missouri	6	1	7
Tennessee	6	1	7
California	5	1	6
Alabama	5		5
West Virginia	5		5
Maryland	4	1	5
Oklahoma	4		4
Rhode Island	4		4
17 other States	28	1	29
Total	265	10	275

The strikers were men in all but 11 strikes which were confined to women, 8 strikes and 1 lockout which included both men and women, and 32 strikes in which the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING SEPTEMBER, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades	53	2	55
Miners	34		34
Building trades	33	1	34
Textile workers	20		20
Clothing	15		15
Bakers	11	3	14
Paper makers	10		10
Cigar makers	9	1	10
Teamsters	6		6
Glassworkers	5		5
Railroad men	5		5
Iron and steel workers	4		4
Longshoremen	4		4
Waiters and cooks	4		4
Upholsterers	4		4
All other	48	3	51
Total	265	10	275

Included in the above are 18 strikes of machinists, 9 of molders, and 6 of carpenters.

In 154 strikes and 8 lockouts the employees were connected with unions; in 19 strikes and 2 lockouts they were not so connected; in 9 strikes they were not connected with unions at the time of striking, but became organized during the course of the strike; in the remaining 83 strikes it was not stated whether the strikers had union affiliation or not.

The following table shows the causes of 216 strikes and 7 lockouts. In 75 per cent of these the questions of wages or hours, or both, were prominent.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING SEPTEMBER, 1916.

Cause.	Strikes.	Lockouts.	Total.
For increase of wages	71	1	72
Because of reduction of wages	4		4
For decrease of hours	23		23
For increase of wages and decrease of hours	36	1	37
General conditions	5	1	6
Conditions and wages	9		9
Conditions and hours	1		1
Conditions, wages, and hours	2		2
Recognition of the union	17	2	19
Recognition and wages	6		6
Recognition and hours	3		3
Recognition, wages, and hours	5	1	6
Because of discharge of employees	5		5
Because of presence of nonunion men	8	1	9
In regard to the agreement	5		5
Sympathy	4		4
Want foreman discharged	2		2
In regard to powder	3		3
Miscellaneous	7		7
Not reported	49	3	52
Total	265	10	275

In 131 of the strikes the number of persons involved was reported to be 150,025, an average of 1,145 per strike. In 31 strikes, in each of which the number involved was 1,000 or over, the strikers numbered 129,910, thus leaving 20,115 involved in the remaining 100 strikes, or an average of 201 in each. In 3 lockouts the number reported to be involved was 158.

In 182 strikes and 7 lockouts only one employer was concerned in each disturbance; in 8 strikes, 2 employers; in 7 strikes, 3 employers; in 3 strikes, 4 employers; in 14 strikes, more than 4; in 51 strikes and 3 lockouts the number of employers was not stated.

In 125 strikes reported as ending in August, 35 were won, 24 lost, 38 compromised; in 8 the strikers returned to work under promise of the employer to arbitrate the matter in dispute; in 20 the result was not reported. Three lockouts were reported as lost to the employer. The duration of 85 of these strikes was given as follows: One day or less, 10; 2 to 3 days, 22; 4 to 7 days, 12; 1 to 2 weeks, 10; 3 to 4 weeks, 20; 1 to 3 months, 8; over 3 months, 3. The duration of the 82 strikes lasting less than 3 months was 1,170 days, or an average of 14 days each.

EIGHT-HOUR DAY IN THE MEN'S CLOTHING INDUSTRY OF CHICAGO.

On October 1, 1916, the members of the Wholesale Clothiers' Association of Chicago posted the following notice in their respective shops:

> Beginning December 1, 1916, 48 hours shall constitute a week's work in this shop. Time and a half will be paid for overtime.

This action was stated to be a voluntary concession to their employees by the members of the association, which is composed of manufacturers of men's ready-to-wear clothing, and, as expressed by them was taken "in keeping with our policy to improve working conditions, reduce hours, and raise wages as rapidly as business conditions would permit." The association favors the open shop and recognizes no unions. It has no collective agreements with its employees. Some months ago it succeeded in defeating a strike of garment workers undertaken under the auspices of the Amalgamated Clothing Workers' Union.

The announcement was posted in all the shops of the association, 15 in number, and employing about 8,000 workers. The amount of increase in the wages as a result of this action is problematical. About two-thirds of the employees in this industry are pieceworkers, and the announcement made no promise of any increase in piece rates. The increase in pay to week workers will be such as results from reducing the hours of labor from an average of 50 to 51 per week before December 1 to 48 thereafter and increasing the pay for overtime, paid for before December 1 at the same rate as regular time, to a time-and-a-half rate after that date.

MILLINERY AS A TRADE FOR WOMEN.

In a volume of 134 pages, entitled "Millinery as a trade for women,"[1] Miss Lorinda Perry, fellow in the department of research of the Women's Educational and Industrial Union, Boston, gives the results of a personal investigation of the working conditions, hours of labor, wages, and opportunities afforded to employees in a trade involving more than 86,000 women in the United States and which gives "opportunity at the top for as high, if not higher, wage than any other trade for women." The material for this study was obtained during the years 1910, 1911, and 1912, chiefly from personal interviews with employers and employees in Boston and Philadelphia, who were questioned concerning apprenticeship, seasons, wages, the number of employees, hours, overtime, and workroom conditions. Of 303 firms properly classed as engaged in the millinery trade in Boston, schedules were secured from 103, the number of persons employed in 97 of these shops ranging from 143 during the dull season to 1,429 at the height of the busy season. In Philadelphia 104 schedules were obtained from firms employing from 232 workers in the dull season to 1,959 in the rush season. In addition, schedules were secured from 140 workers employed in Boston and from 121 employed in Philadelphia. These employees were asked concerning their experience in and attitude toward the millinery trade, and their equipment in the way of general education and special trade training. An attempt was also made to ascertain the economic status of each worker.

The results of the investigation are assembled in considerable detail, and the hope is expressed "that agencies interested in a study of minimum-wage laws, in other regulation of working conditions by legislation, in vocational guidance and placement, in industrial education, and especially in awakening the public conscience, may each find here data which can be rearranged or grouped so as to form a basis upon which to act."

The millinery trade is defined as the designing, manufacturing by hand, and sale of women's hats, excluding such trades as flower making, straw-machine operating, and the making of wire frames by machinery, which may be classified more accurately as the manufacture of millinery supplies.

> Among the trades for women no other trade presents such great complexity as does millinery. As an art it demands high and peculiar ability, called by the trade millinery sense; as a handicraft it requires great skill; as a trade it intro-

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[1] Millinery as a Trade for Women, by Lorinda Perry, Ph. D., Women's Educational and Industrial Union, Department of Research, 264 Boylston Street, Boston, 1916. 134 pp. Longmans, Green and Co., New York, publishers. Price, $1.50 net.

duces subdivision of labor and supports a department in which the processes are mechanical and do not necessarily induct the worker into the more skilled and artistic divisions. As millinery supplies a necessity of life, it is universal and offers occupation in every community. As it deals with attractive materials and produces beautiful effects, it appeals to young women and induces large numbers to enter it. As it includes artistic processes it pays high nominal wages to one group of workers, and as its mechanical processes are skilled it pays good nominal wages to another group. In its origin millinery was a home trade and is usually still so conducted. In smaller communities it is carried on in dwellings; in the larger cities many shops are located in the upper stories of business blocks or in apartments. By far the greater number of shops are small, many having less than five workers, and the relation between employer and employee is distinctly personal.

As a fashion trade millinery is seasonal, and as a trade with two busy and two dull seasons it imposes upon the worker uncertainty and irregularity of employment and requires its less well-paid and even its highly paid workers to eke out a living by overtime work or by subsidiary or secondary occupations. It does not yield readily to State regulation. Its hours of labor are oftentimes not limited; overtime is not restricted; sanitation, light, and ventilation are not insisted upon; the worker is not guaranteed comfort in the workroom as to seats, tables, and cleanliness; regularity of pay, permanence of contract, and due notification of dismissal are not required. As a home trade, too, millinery is unorganized. No correction of the evils attendant upon an unregulated trade has been successfully attempted through unionization. More than in other needle trades, its workers are young and immature. It therefore lacks ballast and reflects instability of purpose on the part of employees.

The main reasons given why workers need sources of income other than their wages as milliners are (1) the seasonal character of the trade, varying in length from six to eight months and involving much overtime work; (2) its two distinct processes, only one of which employs high-paid workers, and that a small group; and (3) the oversupply of workers.

The chief source of subsidy is found in the requirement of employers that their workers live at home. The worker may receive sufficient wages to maintain herself while at work, and even to contribute something to the family budget, but in the event of unemployment or illness she is compelled to rely upon her family or friends for assistance. Unemployment is a vital question for all but the trimmer, who averages a living wage throughout the year. If the maker is unable or unwilling to obtain secondary employment, her wages must be subsidized either by her family or from other sources. Employers often attempt to gloss over the low wages and short seasons of the trade by explaining that their employees are working for "pin money" only. Interviews with workers did not verify this statement.

The study shows that 54.5 per cent of the total number of Boston workers reporting and 63.6 per cent of the Philadelphia workers were either wholly or partially dependent upon their earnings for support; that 83.4 per cent in Boston and 84 per cent in Philadelphia lived with their parents or other relatives.

The author makes the following classification of millinery establishments: (1) The private establishment, including private or home millinery and parlor millinery; (2) retail establishments, comprising the millinery store and the millinery department of a department store; (3) wholesale establishments, consisting of wholesale millinery and manufacturing wholesale millinery. She then enters into a brief description of each, showing how the classes vary according to (1) market, (2) amount of capital invested, and (3) the relation of the employer to customers and to employees, and also the six stages of industrial evolution indicated by the subclasses.

The seasonal character of the work is brought out in tables showing the fluctuations in size of workroom force in the two cities under consideration. Thus 97 firms in Boston reported a reduction of 92.8 per cent in the dull season, and 102 firms in Philadelphia reported a reduction of 88.1 per cent. Based on complete pay rolls covering 133 Boston workers for the year 1912, 24 per cent were employed 6 months and less than 8, while, according to information furnished by 103 workers themselves, 26.2 per cent worked 6 months and less than 8. In Philadelphia 40 of 100 workers reported having worked 8 months and less than 10. It appears that in Boston a majority of workers were employed for a longer period in the spring than in the fall.

Two general classes of problems connected with the busy and dull seasons are stated to be an integral part of the question of seasonal employment: The problem of the busy season, involving (1) the taking on of a large force of workers which must be dismissed as soon as the early rush is over, (2) the nervous strain for both employers and employees incident to the speeding-up process, and (3) unavoidable overtime which accompanies the filling of rush orders; and the problem of the dull season, that of unemployment. "The solution of the seasonal problem usually attempted is the dovetailing of millinery with some other business or trade—the employer combining it with other business, the employee with other occupations."

The study does not include information as to overtime in Boston establishments, but in Philadelphia 59 per cent of the total number of firms visited reported overtime to some extent, while over 51 per cent of the employees reporting stated that they had worked overtime during the year in which the investigation was made. "In the last analysis the blame for the practice of overtime may be laid squarely upon the shoulders of the customers." To abolish overtime various means are suggested: (1) The better organization of the working force and of the business in general, (2) a campaign of education among customers to persuade them to be more considerate in their orders, and (3) legal prohibition.

One chapter of the report, containing considerable statistical data, is devoted to the wages paid. This includes the nominal weekly wages, that is, the time wage received by a worker as specified in her agreement with her employer and the actual earnings of workers. Time wages appear to be the prevailing method of payment, although some workers are paid by the piece. According to Boston pay rolls, it seems that the total annual earnings of makers[1] ranged from less than $50 to less than $475 per year, the median total annual earnings being $210.52; the largest number (63.7 per cent) earned between $100 and $300 per year. The wages seemed to vary according to the occupation and type of shop in which the workers were employed and the length of their experience. Tables are presented showing that a majority of makers received a nominal weekly wage of less than $9, the largest number receiving from $6 to $8, while a nominal weekly wage of $8 to $9 seems to be the highest wage an average worker may expect. A few received $10 or over per week. Wages are reduced by occasional absences from work, so that the nominal wages of makers are docked amounts averaging from 25 cents to $1 a week. The short season also operates to reduce wages. Thus it was found that no maker had an average wage throughout the year of $9 a week, while the majority averaged less than $5. The following table compares the type of wage return and gives the per cent of makers in Boston,[2] as shown by pay rolls, receiving each specified amount:

PER CENT OF BOSTON HAT MAKERS (BASED ON PAY ROLLS) RECEIVING EACH SPECIFIED WEEKLY WAGE ACCORDING TO TYPE OF WAGE RETURN.

Type of wage return.	Per cent of makers receiving—				
	Less than $5.	Less than $7.	Less than $9.	Less than $11.	Less than $13.
Nominal weekly wage	9.1	42.8	75.5	91.3	100.0
Average weekly wage	21.4	57.8	84.4	96.5	100.0
Average weekly wage throughout the year	67.0	83.5	100.0	....	....

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[1] "The problem of wages paid to makers is more important than that of any other group since they constitute about three-fourths of the total number of workers in the trade. The apprentices at one end of the scale receive instruction in part payment for services and are not self-supporting. The trimmers at the other end receive high wages and are entirely self-supporting."

[2] Similar information for Philadelphia workers is not given.

The next table shows the number and per cent of makers in Boston and Philadelphia receiving each specified nominal weekly wage:

NOMINAL WEEKLY WAGE OF BOSTON AND PHILADELPHIA HAT MAKERS, BASED ON REPORTS FROM WORKERS AND (IN BOSTON) ON PAY ROLLS.

Nominal weekly wage.	Number of workers receiving specified wage according to reports from—							
	Boston workers.		Boston pay rolls.		Philadelphia workers.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
$3 and less than $4	3	4.0	12	5.8	8	13.6	23	6.7
$4 and less than $5	8	10.7	7	3.4	6	10.2	21	6.1
$5 and less than $6	14	18.7	24	11.5	3	5.1	41	12.0
$6 and less than $7	10	13.3	46	22.1	8	13.6	64	18.7
$7 and less than $8	6	8.0	32	15.4	12	20.3	50	14.6
$8 and less than $9	10	13.3	36	17.3	10	16.9	56	16.4
$9 and less than $10	3	4.0	19	9.1	5	8.5	27	7.9
$10 and less than $11	11	14.7	14	6.7	4	6.8	29	8.5
$11 and less than $12	....	....	5	2.4	2	3.4	7	2.0
$12 and less than $13	8	10.7	13	6.3	1	1.7	22	6.4
$13 and less than $14	1	1.3	....	....	....	....	1	.3
$15 and less than $16	1	1.3	....	....	....	....	1	.3
Total	75	100.0	208	100.0	59	100.0	342	100.0

The nominal weekly wage of trimmers appears to range from $10 to $25, the majority receiving between $12 and $20. Here again the wage is affected by occasional absences from work, the amount varying from $1 to $5 a week. The comparatively high wage received by trimmers apparently offsets their losses on account of the seasonal character of the trade so that but few instances were found where the average weekly wage was reduced to $9. While the average trimmer does nót receive more than a nominal weekly wage of $20, those possessing superior ability may earn as high as $35 or even $50 a week. Workers employed in retail establishments seem to receive a higher wage than those in wholesale establishments. A study, based on pay rolls, of the relation between the number of weeks employed during the year and the nominal wage received showed that the less highly paid maker was employed for shorter seasons than the more highly paid, but in most shops it is the trimmer receiving the medium wage who may be retained for the longest season. The study disclosed the fact that wages for makers are advanced at the rate usually of $1 a week, infrequently of $2, and that trimmers' rates are advanced from $1 to $5 per week; wages paid to makers and trimmers tend to increase with the length of experience, the majority of less than five years' experience earning nominal wages of less than $8 and less than $15, respectively.

With comparatively high family standards, it is not surprising that the millinery workers should turn from factory work and enter a trade where they do not lose social caste, and may even advance their own social position. Many doubtless regard this social prestige as an adequate supplement to the inferior wages they receive, but the large number of such workers is one element tending to lower the wages of millinery workers, and exerts almost as strong an influence as trade conditions themselves. There is no adequate reason why workers with more than the average education, with sufficient means to enable them to spend one year in acquiring a trade, should be willing to work for wages that do not insure a decent standard of living unless supplemented from other sources. To bring about any permanent cure for the low wages of millinery, not only the present unregulated, unorganized condition of the trade, but also the attitude of the workers toward industry in general must be changed.

The opportunity for advancement does not appear to be very encouraging since it is shown by the investigation that only one maker in six or seven has a chance to rise to the artistic division—that of the trimmers—where the wages received during the busy season are sufficient to tide a worker over the dull season without aid from other sources.

The report includes a study of the nationality, ages, and working conditions of millinery workers. It appears that in Boston about 55 per cent of these workers are American and Irish, and in Philadelphia by far the greatest number (about 62 per cent) are Americans. Jews rank next to these in number in both cities. In Boston 66 per cent of the total number of workers reporting and in Philadelphia 62 per cent of the total number visited were under 25 years of age; and about 57 per cent in Boston and 54 per cent in Philadelphia were over 16 and under 25.[1] The highest per cent of older workers was found among the Americans and Irish, while most of the younger workers were Jews.

The educational standards of millinery workers were found to be above the average, although the educational requirements of the trade are not high. In Boston 33.6 per cent and in Philadelphia 24.8 per cent were graduated from grammar schools, while of those in the Boston trade school from whom information was received 43.6 per cent had completed the grammar school.

The report concludes with a chapter on ways of learning millinery, in which is discussed the apprenticeship system and school training for millinery in Boston. It appears that a majority of workers in both cities obtained their training as apprentices, but from the standpoint of the workers "the chief objection to the apprenticeship system as it now exists is the danger of exploitation to which the beginner is often exposed," and also the danger arising from the fact that "often the moral atmosphere of the workroom is not desirable." Employers object to the system, it is stated, because (1) apprentices use the time of valuable workers in teaching, (2) because they waste costly material, and (3) because often by the time the learner has acquired sufficient knowledge and skill to repay the time and effort expended in teaching her she demands wages.

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[1] It is explained that the large number of trade school workers visited accounts for the high per cent of younger Boston workers as well as the small proportion of Boston workers 25 years of age and over.

> On the whole, the apprenticeship system does not seem to be satisfactory. * * * For the young girl of 14 to 16, or even 18 years, the trade school or some place equally removed from the exigencies of the trade affords a surer road to success. * * *
>
> Under the existing conditions good millinery schools and good trade schools are necessary if the great mass of milliners are to receive adequate training. Through the trade school, dealing as it does with young girls, without doubt much can be done to make the trade as desirable as it is attractive. Not only should the schools prepare a group of efficient workers but they should deter those who are unfit from entering the trade. They should also permit only that number to undertake the training which can be used by the trade and thus help to correct the oversupply of labor. The trade schools can not solve all of the problems of the trade, but they can do much for the workers and much to influence the trade itself through employers. They can also present to the public the conditions and needs of the trade from the point of view of both employer and employee, and thus arouse in the consumer a sense of her responsibility and duty.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor Statistics from approximately 725 retail dealers in 44 of the principal cities of the United States show that the retail price of food as a whole increased approximately 3 per cent from July 15 to August 15, and 4 per cent from August 15 to September 15. From July to September the increase was approximately 6 per cent.

Beef shows a slight decline in price from July 15 to September 15, pork chops advanced 8 per cent, while lard shows an increase of 7 per cent. Eggs, butter, cheese, milk, bread, flour, and potatoes all show an increase in price in the period stated from 3 per cent for milk to 27 per cent for flour, and 29 per cent for eggs. The two articles which declined in price are onions, with a decrease of 14 per cent, and sugar, with a drop of 12 per cent, from July 15 to September 15.

The table which follows shows the relative retail prices on July 15, August 15, and September 15, 1916, of the 26 articles covered by the bureau's reports, together with the average money prices on the same dates. The plus and minus signs are used to indicate that the exact figure was slightly more or slightly less than the average money price carried to three places, or the relative price with the terminal decimal dropped.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON JULY 15, AUG. 15, AND SEPT. 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price.			Relative price.		
		July 15.	Aug. 15.	Sept. 15.	July 15.	Aug. 15.	Sept. 15.
Sirloin steak	Pound	$0.283+	$0.283+	$0.281−	111+	111−	110+
Round steak	do	.257+	.255−	.255−	113−	112−	112−
Rib roast	do	.220	.218	.218	110+	109+	109−
Chuck roast	do	.177+	.176−	.176−	110+	109−	109−
Plate boiling beef	do	.131+	.129−	.130+	108+	106+	107−
Pork chops	do	.236−	.236−	.254+	116−	116+	125−
Smoked bacon	do	.295+	.295+	.301−	108−	108+	110+
Smoked ham	do	.294+	.297−	.302+	114−	115−	117−
Lard, pure	do	.175−	.176+	.186+	118−	119	126−
Hens	do	.241+	.239+	.244−	116−	115−	117−
Canned salmon	do	.202	.202	.204	101	101+	102−
Eggs	Dozen	.315−	.358+	.405+	94−	107−	121
Butter, creamery	Pound	.360+	.367+	.396+	100−	102+	110−
Cheese	do	.243−	.245−	.256+	105	106−	111−
Milk	Quart	.090	.092−	.093−	100+	102	103
Bread	16-oz. loaf[1]	.056+	.058+	.062+	99+	102−	109−
Flour	⅛-barrel bag	.923+	1.074−	1.174−	92+	107−	117+
Corn meal	Pound	.031+	.032−	.033−	100−	102−	104
Rice	do	.091−	.092−	.091−	100+	101−	100+
Potatoes	Peck	.346+	.362+	.415−	151−	158−	181−
Onions	Pound	.053+	.050−	.045+	154−	144+	132+
Beans, navy	do	.116−	.119+	.119+	150	155+	155+
Prunes	do	.131+	.131+	.131+	99−	99−	99+
Raisins, seeded	do	.128+	.128+	.129+	102−	102−	103−
Sugar	do	.088−	.085+	.077+	133+	129+	117+
Coffee	do	.302−	.302−	.302−	100−	100−	100−
Tea	do	.551+	.551+	.551+	100+	100+	100+
All articles combined					109−	112−	116+

[1] 16 ounces (weight of dough).

All articles combined show an advance of 19 per cent in a comparison with August, 1912, with August, 1915, and each article with prices given for the five-year period also shows an advance. Sugar shows the greatest change, an advance of 39 per cent. All fresh meats for which prices were carried for the five-year period show an increase, round steak having advanced approximately 22 per cent. Flour advanced 26 per cent. From August 15, 1915, to the same date in 1916 all articles combined show an increase of 13 per cent. The three articles showing the greatest change are beans, which increased 60 per cent; onions, 62 per cent; and potatoes, 72 per cent.

The next table shows the average money prices and the relative prices on August 15 of each year, from 1912 to 1916, as far as data are available.

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON AUGUST 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of August in each year was of the average price for the year 1915.]

Article.	Unit.	Average money price Aug. 15.					Relative price Aug. 15.				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.245−	$0.263−	$0.278+	$0.263−	$0.283+	96+	103−	109−	103+	111−
Round steak	...do	.209+	.230−	.248+	.237−	.255−	92−	101+	109+	104−	112−
Rib roast	...do	.194	.202	.214	.204	.218	97+	101−	107−	102+	109+
Chuck roast	...do			.179−	.164+	.176−			111−	102	109−
Plate boiling beef	...do			.130+	.123−	.129−			107+	101−	106+
Pork chops	...do	.211+	.220−	.252+	.218−	.236−	104−	108	124−	107−	116+
Smoked bacon	...do	.249−	.287−	.292+	.276−	.295+	91+	105−	107−	101−	108+
Smoked ham	...do	.245+	.281+	.287−	.261−	.297−	95−	109−	111+	101−	115−
Lard, pure	...do	.151−	.161+	.157−	.142+	.176+	102−	109	106−	96−	119
Hens	...do	.200−	.214+	.221−	.206+	.239+	96+	103+	106+	99+	115−
Canned salmon	...do				.200	.202				100−	101+
Eggs	Dozen	.305−	.325−	.328+	.302−	.358+	91−	97−	98−	90−	107−
Butter, creamery	Pound	.342+	.357−	.364−	.339−	.367+	95+	99	101−	94−	102+
Cheese	...do				.226+	.245−				98+	106−
Milk	Quart	.088+	.090	.091−	.089+	.092−	98−	100−	101−	99+	102
Bread	16-oz.loaf[1]			.051−	.057+	.058+			89+	101+	102−
Flour	⅛-bbl.bag.	.853−	.803−	.843−	.993+	1.074−	85	80−	84	99−	107−
Corn meal	Pound	.030+	.029−	.030+	.031+	.032−	96−	92−	97−	100−	102−
Rice	...do				.091−	.092−				100+	101−
Potatoes	Peck	.286+	.282−	.286+	.211−	.362−	125−	123−	125+	92−	158−
Onions	Pound				.031−	.050−				89+	144+
Beans, navy	...do				.075−	.119+				97+	155+
Prunes	...do				.133−	.131+				100+	99−
Raisins, seeded	...do				.126−	.128+				100−	102−
Sugar	...do	.061+	.056+	.079+	.067+	.085+	93+	85+	120−	102+	129+
Coffee	...do				.302−	.302−				100	100−
Tea	...do				.551+	.551+				100+	100+
All articles combined							94+	99+	105−	99+	112−

[1] 16 ounces (weight of dough).

All articles combined show an increase of 21 per cent, comparing September, 1912, and September, 1916, while the increase from September, 1915, to September 1916, was 16 per cent.

As in August, potatoes, beans, and onions show the greatest change, the increase between September, 1915, and September, 1916, being 103 per cent for potatoes, 58 per cent for beans, and 53 per cent for onions.

The following table shows the price changes comparing each, September, 1912 to 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON SEPTEMBER 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of September in each year was of the average price for the year 1915.]

	Unit.	Average money price Sept. 15—					Relative price Sept. 15—				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.242+	$0.260+	$0.270+	$0.263−	$0.281+	95+	102+	106−	103−	110+
Round steak	do	.205	.230−	.243−	.234+	.255−	90+	101+	107+	103	112−
Rib roast	do	.192	.200	.208	.204	.218	96−	100	104	102−	109−
Chuck roast	do			.176−	.163−	.176−			109+	101+	109−
Plate boiling beef	do			.130+	.122−	.130+			107−	100+	107−
Pork chops	do	.222−	.228−	.238−	.226−	.254+	109+	112+	117−	111+	125−
Smoked bacon	do	.257−	.284+	.295+	.273+	.301−	94+	104+	108−	100+	110+
Smoked ham	do	.248−	.279−	.287−	.258+	.302+	96+	108−	111+	100−	117−
Lard, pure	do	.155+	.161+	.157−	.139+	.186+	105−	109−	106−	94+	126−
Hens	do	.204−	.216+	.219−	.208+	.244−	98−	104−	105+	100	117−
Canned salmon	do				.200	.204				100−	102−
Eggs	Dozen	.342+	.372−	.362−	.342+	.405+	102+	111−	108	102+	121
Butter, creamery	Pound	.360+	.378+	.378+	.339−	.396+	100+	105+	105+	94	110−
Cheese	do				.226+	.256+				98−	111−
Milk	Quart	.088+	.091−	.091−	.090	.093−	98	101−	101−	100−	103
Bread	16-oz. loaf[1]			.052−	.057−	.062+			91−	100	109−
Flour	⅛-bbl. bag.	.833−	.803−	.903−	.933+	1.174−	83+	80−	90+	93−	117+
Corn meal	Pound	.030+	.029+	.032−	.031−	.033−	96−	94+	101−	99+	104
Rice	do				.091−	.091−				100+	100+
Potatoes	do	.245+	.284+	.270+	.204−	.415−	107−	124−	118−	89+	181−
Onions	do				.030−	.045+				86+	132+
Beans, navy	do				.076−	.119+				98−	155+
Prunes	do				.133−	.131+				100+	99+
Raisins, seeded	do				.126−	.129+				100−	103−
Sugar	do	.062+	.057+	.060−	.065−	.077+	94−	87−	121+	98+	117+
Coffee	do				.302−	.302−				100−	100−
Tea	do				.551+	.551+				100+	100+
All articles combined							96+	101−	106−	100+	116+

[1] 16 ounces (weight of dough).

COMPARISON OF CHANGES IN PRICES OF WHEAT AND FLOUR AND IN WEIGHT AND PRICES OF BREAD, MAY TO SEPTEMBER, 1916.

Changes in weights of the principal brands of bread are being reported currently to the Bureau of Labor Statistics by leading bakers in 45 of the principal industrial cities of the United States.

These reports show that while the weight of bread has been constantly changing, an unusual reduction occurred between August 15 and the last current report, September 15.

Within the past two months numerous notes have been received from the bakers stating that owing to the increase in cost of raw materials it has been necessary to decrease the weight of their loaves or advance the price per loaf.

One western baker, then making a 10-cent loaf weighing 25 ounces in the dough, and approximately 23 ounces baked, wrote in August that the State sealer of weights and measures had ruled that bread must not weigh less than 24 ounces baked, and added that his firm had already lost $6,000 since January.

In another city an ordinance prohibiting a 14-ounce loaf (baked weight) had the effect of eliminating the 5-cent loaf in September, the bakers substituting a 10-cent loaf. This change actually decreased the amount of bread for 5 cents from 14¾ ounces (before baking) on July 15, before the transition to the 10-cent loaf, to 11⅝ ounces for 5 cents after the transition.

The Bureau of Labor Statistics uses in its publications only the "scaling" weight—that is, the weight of the loaf before baking—for the reason that the weight after baking varies considerably. While machines for weighing and dividing the dough into loaves render it comparatively easy to secure accurate "scaling" weights, the weight of the loaf as baked and cooled, ready for distribution, varies with the style of loaf, with the formula, and with the temperature of the oven—all this before leaving the bakery. From then on the weight varies with the time intervening between the removal of the loaf from the oven and its delivery to the consumer, the conditions under which it is kept—that is, whether on open counters or in closed cases, wrapped or unwrapped, etc.—and by the state of the atmosphere. This variation renders it impossible for the baker to label accurately the baked weight of his loaves, and if labeling is required it necessitates a statement of the minimum instead of the actual weight.

The customary loss in baking is variously estimated by bakers, but a loaf weighing 18 ounces in the dough will, when sold, if handled under ordinary conditions, weigh not far from 16 ounces, and a loaf weighing 16 ounces in the dough will, when baked and cooled, weigh about 14½ ounces. The range of loss, however, varies widely.

The recent changes are more often in weight than in price, but in some cities an increase in price seems to have been general. Frequently the change in price has been accompanied by an increase in weight, but in some cities from which the bureau receives reports the price was raised 1 cent with no change in weight, while in at least one city the price was raised with an actual decrease in weight.

The recent striking advance in the cost of flour, together with advances in other ingredients, has caused not only numerous reductions in bread weights and advances in price, but a number of bakers have taken other means of meeting the cost advances. Some have discontinued their wholesale business and now conduct only a retail business; some have eliminated the brands they have been making and have substituted others, which are presumably cheaper; and some have eliminated the return of stale bread.

The bureau has traced the change in weight or price between July 15 and September 15 of 210 brands of bread that retailed at 5 cents per loaf and 74 that retailed at 10 cents per loaf, on July 15.

A table is given showing the changes in the 210 brands that retailed at 5 cents per loaf on July 15.

CHANGE IN WEIGHT OR PRICE OF 210 IDENTICAL BRANDS OF BREAD OF DIFFERENT WEIGHTS, ALL RETAILING AT 5 CENTS PER LOAF ON JULY 15, 1916.

Weight before baking (scaling weight).	Brands selling on July 15 at 5 cents per loaf.	Brands selling on Aug. 15 at—			Brands selling on Sept. 15 at—		
		5 cents per loaf.	6 cents per loaf.	10 cents per loaf.	5 cents per loaf.	6 cents per loaf.	10 cents per loaf.
Ounces.							
Under 12		1			13		
12	6	15			32		
12¼	1				2		
12½		2			9		
12¾	2	3			1		
13	23	23			46	2	
13¼	2	5			4		
13½	17	21			21	4	
13¾	3	5			6		
14	53	50	3		32	7	
14¼		1			2		
14½	28	27			5		
14¾	2	2					
15	45	33			6	3	
15¼	2	1					
15½	4	4			2	1	
15¾	1						
16	9	8			3		
17	2	3					
17½	3	1			1		
18	4	2			2		
19	3						
23½							2
24							1
28							3
Total	210	207	3		187	17	6

By August 15, 3 brands had been increased in price to 6 cents, and there had been a reduction in the number of brands of heavier weight and an increase in the number of brands of lighter weights. By September 15, 17 of the 210 brands had been increased to 6 cents and 6 brands to 10 cents; and the movement toward a reduction of weight where the price had not been changed was much more marked. In July, 6 brands, or 3 per cent of the 210 brands, scaled at 12 ounces or under, while in September, 45 brands, or 21 per cent, scaled at 12 ounces or under. Comparing the heavier weights, the figures show that 73 brands, or 35 per cent, scaled at 15 ounces or over in July, while in September only 14 brands, or 7 per cent, remained at 5 cents and scaled 15 ounces or over.

While detailed figures are not given showing the changes in the 74 loaves retailing at 10 cents on July 15, summary figures show material reductions in weight. No 10-cent loaf scaled under 24 ounces in July, but in August, 1 scaled at 22 ounces, and in September, 10 brands, or 14 per cent, scaled 22 ounces or under. In July one-fourth of the seventy-four 10-cent brands scaled at 26 ounces or under, while two-thirds of the 10-cent loaves scaled at 26 ounces or under in September. Seven of the 74 loaves scaled at 30 ounces or over in July, while but 2 remained in this class in September.

A more detailed analysis has been made by the bureau of the larger July groups in the above table. Such analysis shows that of 23 brands of bread retailing at 5 cents and scaling at 13 ounces on July 15 only 2 brands remained at the same weight and price on September 15. One brand remained at 13 ounces, but had been advanced to 6 cents per loaf. Four brands had been reduced to 12½ ounces and 10 brands to 12 ounces. All of the other brands had been reduced to lower weights, 1 as low as 10½ ounces.

Of 17 brands retailing at 5 cents and scaling at 13½ ounces on July 15, 6 remained at the same weight and price on September 15; 4 remained at the same weight but had been increased to 6 cents per loaf, and 2 had been increased to 14 ounces and the price raised to 6 cents per loaf. The other brands of this group had been reduced in varying amounts, 1 to scale as low as 11 ounces.

Tracing the change in the 53 brands retailing at 5 cents and scaling at 14 ounces on July 15, it is found that but 14 brands remained at the same weight and price; 16 had been reduced to 13 ounces and 9 to 12 ounces; 1 had been reduced in weight to 13 ounces with the price increased to 6 cents; 4 brands remained at 14 ounces with the price advanced to 6 cents; 3 brands had been increased to 15 ounces and retailed at 6 cents; and 3 brands had been changed to a scaling weight of 28 ounces and retailed at 10 cents. It is interesting to note that while the scaling weight and price of these 3 brands had been doubled, thus continuing the same amount of bread for 5 cents, a saving probably had been effected in the amount of labor required per pound of product. The remainder of the 53 brands while remaining at 5 cents had all been reduced in weight, 1 brand to as low as 12½ ounces.

Of 28 brands retailing at 5 cents and scaling at 14½ ounces on July 15, 8 had been reduced by September 15 to 13½ ounces and 9 to 13 ounces; 1 had been increased to 15½ ounces and retailed for 6 cents, and 1 had been reduced to 14 ounces and retailed at 6 cents. The remainder of these 28 brands remained at 5 cents a loaf but had all been reduced in weight, 3 brands being reduced to as low as 12 ounces.

Of 45 brands retailing at 5 cents and scaling at 15 ounces on July 15 all except 3 had been reduced in scaling weight or increased in price; 2 had been reduced to 14½ ounces, 14 had been reduced to 14 ounces, 7 to 13½ ounces, 15 to 13 ounces, and 3 to 12 ounces; 1 brand had been changed to a 27-ounce loaf to retail at 10 cents.

The bureau, from its current figures on prices of wheat and flour, has also compiled comparative data for these articles from September back to May, and the price of bread on the pound basis has also been computed for the same period. The prices are for the middle of each month. The table below shows the average price of each article, and in connection with such figures relative prices are given indicating the per cent that the price in each succeeding month was of the price in May. Thus, in September the average price of wheat was 134 per cent of the price in May; in other words, 34 per cent higher. The wholesale price of flour was 37 per cent higher than in May, the retail price 23 per cent higher, and the retail price of bread 11 per cent higher.

AVERAGE WHOLESALE PRICES OF WHEAT AND FLOUR, AND AVERAGE RETAIL PRICES OF FLOUR AND BREAD AT THE MIDDLE OF EACH MONTH, MAY TO SEPTEMBER, 1916.

Month.	Wheat.		Wheat flour.				Bread.	
	Average wholesale price.		Average wholesale price.		Average retail price.		Average retail price.	
	Actual price per bushel.	Relative price.	Actual price per barrel.	Relative price.	Actual price per ⅛ barrel.	Relative price.	Actual price per pound before baking.	Relative price.
May	$1.162	100	$5.48	100	$0.953	100	$0.056	100
June	1.046	90	5.11	93	.933	98	.056	100
July	1.119	96	5.44	99	.923	97	.056	100
August	1.453	125	7.07	129	1.074	113	.058	104
September	1.559	134	7.49	137	1.174	123	.062	111

The next table is of even more interest. It shows the retail margin of prices each month for flour and bread. At the middle of May the wholesale price of flour was $5.48 per barrel, while the retail price was $7.62, leaving a margin of $2.14 to cover railroad transportation, cartage, the retailer's expenses and profits, and usually a jobber's expenses and profits between the mill and the retailer. In September the margin was $1.90 per barrel. These figures are market margins rather than profits, as retail prices do not always follow wholesale prices promptly owing to stock on hand, and minor fluctuations in wholesale prices frequently do not affect retail prices.

PRICE MARGINS OF FLOUR AND BREAD, MAY TO SEPTEMBER, 1916.

Month.	Wholesale price of flour (per barrel).	Retail price of flour (per barrel).	Margin of retail over wholesale price of flour (per barrel).	Wholesale price of 10.45 ounces of flour in 1 pound of bread before baking, assuming 300 loaves to the barrel.	Retail price per pound of bread before baking.	Margin of retail price of bread over wholesale price of flour in bread.
May	$5.48	$7.62	$2.14	$0.018	$0.056	$0.038
June	5.11	7.46	2.35	.017	.056	.039
July	5.44	7.38	1.94	.018	.056	.038
August	7.07	8.59	1.65	.024	.058	.034
September	7.49	9.39	1.90	.025	.062	.037

Approximately three hundred 1-pound loaves of dough, weighed before baking, can be made from one barrel (196 pounds) of flour. On this assumption 10.45 ounces of flour are required to make 1 pound of dough. With the wholesale price of flour $5.48 in May the value of 10.45 ounces was 1.8 cents. The average retail price of bread that weighed 1 pound before baking was 5.6 cents in May, making a margin of 3.8 cents between the wholesale price of flour in a 16-ounce loaf of dough and the retail price of the same loaf baked. This margin covers the cost of all other material entering into the bread, as sugar, lard, yeast, milk, etc., bakery wages, and other expenses of the baker, and his profit. This margin must also cover the cost of retailing and the retailer's profit.

ANALYSIS AND COST OF READY-TO-SERVE FOODS.

In a little volume of 83 pages entitled "Analysis and Cost of Ready-to-Serve Foods,"[1] Prof. F. C. Gephart, chemist of the Russell Sage Institute of Pathology, in affiliation with the second medical division of Bellevue Hospital, gives the results of his analysis, conducted during the spring and summer of 1913, of the different portions or orders of food served in nearly half a hundred restaurants operated under one management in New York City. The purpose of this study in food economics was to obtain, if possible, data concerning the composition and energy content of various kinds of food that are actually chosen by the people for consumption. In all, about 350 orders were collected, the analysis representing practically the entire offering of the restaurants.

The author presents a tabulation of 242 of these orders, showing the constituents of the food; their weight in grams; the cost of the samples; the number of calories[2] present; the number of calories for each 5 cents of cost; the distribution of heat—that is, the per cent of protein, fat, and carbohydrate; and the classification of the food—that is, whether it is meat, pastry and dessert, eggs, sandwiches, fruit, soup, dairy dishes, beans, oysters, salads, or miscellaneous. A table of 23 sections is included, showing the constituents and the number of calories and total nutritional calories for 5 cents, of certain samples of food which were repeatedly analyzed; also a table presenting for certain foods the cost of 2,500 calories[1] as well as the cost per portion, the estimated wholesale cost of the ingredients per portion, the nutritional calories per portion, and the nutritional calories for 5 cents. From this table it is seen that there are 184 dishes yielding 2,500 calories at a maximum cost of $1. A final table gives a summary of the cost of 2,500 calories with reference to the kind of food purchased. The following table indicates the foods containing the highest and lowest nutritional calories for 5 cents as analyzed by Prof. Gephart:

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[1] Analysis and Cost of Ready-to-Serve Foods, by F. C. Gephart, with an introduction by Graham Lusk. American Medical Association, 535 North Dearborn Street, Chicago, 1915. 83 pp.

[2] It is explained in the introduction that in the oxidative destruction of protein, carbohydrate, and fat in the food heat is liberated and that the unit of heat measurement—the calorie—is that quantity of heat required to raise 1 liter of water (1.05+ quarts) 1° C. It is estimated that the fuel requirement of "that great class of human beings whose business it is to sit at their desks or to watch machinery and who may walk to and from their work" is 2,500 calories, that individuals who stand at work require about 3,000 calories, that farmers require 3,500, stonemasons 4,500, lumbermen 5,000 and over.

FOODS FURNISHING HIGHEST AND LOWEST NUTRITIONAL CALORIES FOR 5 CENTS.

Classification.	Number of orders.	Nutritional calories for 5 cents.	
		Highest.	Lowest.
Soups	17	Beef stew	Tomato soup with rice.
Meats	87	Lamb croquettes and mashed potatoes.	Deviled crab.
Sandwiches	56	Roast beef sandwich with roll	Sliced chicken sandwich.
Eggs	33	Plain omelet	2 poached eggs on toast.
Beans	24	Boston baked beans	Boston beans "on the side."
Dairy dishes	12	Milk crackers	Cream of wheat.
Oysters	6	Oyster pie	Raw oysters.
Pastry and dessert	47	Napoleon	Strawberry shortcake.
Salads	4	Potato salad	Crab-meat salad.
Fruits	14	Baked apple and cream	Cantaloupe.
Miscellaneous	44	Corn muffins	Tomatoes and lettuce with dressing.

In the table showing the cost of 2,500 calories it appears that each of 34 orders supplied 2,500 calories for 50 cents or less, 18 of the number being classed as pastry and dessert; each of 157 orders supplied 2,500 calories for 50 cents to $1, 60 of which were meat orders; each of 39 orders supplied 2,500 calories for $1 to $1.50, 10 of which were meat orders. It also appears that about 35 per cent of the orders costing $1 or less per 2,500 calories were meat orders. For 50 cents to $1, 2,500 calories were secured in nearly 64 per cent of all orders.

> In view of the fact that 80 per cent[2] of all the orders purchased by us supplied 2,500 calories for $1 or less, and that 35 per cent of this number were meat orders, it can hardly be argued that we are in the midst of the "high cost of living."

A classified list of portions arranged in groups according to their caloric value is given for the purpose of furnishing an easy means of dietary regulation. From this table it is possible to choose the number of articles to total the desired food value of the meal, noting in each instance the individual food value in round numbers of the portion, as well as the cost. From this table it appears that a mean of all orders purchased shows that 13.2 per cent of the total heat is derived from protein, this being regarded as an excellent physiologic mean.

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[1] For the purpose of this study 2,500 calories is taken as the standard requirement for a man leading a sedentary life.

[2] Based on the figures in the table the percentage is 77.3.

The volume contains an extended introduction by Graham Lusk, professor of physiology of the Cornell University Medical College, and scientific director of the Russell Sage Institute of Pathology. Prof. Lusk defines food as a "well-tasting mixture of foodstuffs of such a composition that the body is not injured by its use, and of sufficient quantity to maintain the body in good condition," and then proceeds to show the value of the flavor of food, the importance of considering its composition—that is, its protein, carbohydrate, and fat content—and the importance of regulating the quantity consumed. In connection with his discussion of the latter the writer points out that the daily fuel requirement of a man leading a sedentary life is about 2,500 calories, and then gives as typical the composition of a ration containing 1,000 calories, 16 per cent of which is in protein and 84 per cent nearly equally divided between fat and carbohydrate. This ration includes—

	Ounces.	Calories.
Cooked beans	7⅜	400
Pork	1	234
Bread	2⅓	180
Butter	½	103
Milk	5	100
Coffee	5	---

The actual cost price of this meal is given as 4¼ cents, excluding labor and rent, but including the coal used. Thus the 2,500 calories required to maintain a man out of work on this diet would cost 10.6 cents a day, or $38.70 a year.

The author presents a table, based on the results of Prof. Gephart's analysis, giving the cost of each food if that particular variety were alone made to furnish 2,500 calories, to which is added the restaurant price of these 2,500 calories and the number of portions necessary to furnish them. Selected menus for a week are shown, giving the cost and caloric content of inexpensive dishes which may be ordered at a restaurant. These menus represent a total expenditure of $3.90 per week for 2,739 calories per day. The actual cost of a standard portion is said to be from one-third to one-half the cost in the restaurant. Thus an order of ham and eggs, bread, butter, and potatoes, for which the restaurant charges 25 cents, costs approximately 12.44 cents for material only, and furnishes 800 calories.

RETAIL PRICES IN FOREIGN COUNTRIES.

The relative retail prices (index numbers) published by several foreign countries have been brought together by this bureau in the subjoined table after having been reduced to a common base, viz, prices for the year 1913 equal 100. As indicated in the table some of these index numbers are weighted and some are not, while the number of articles for which prices are quoted differ widely. They should not be considered as closely comparable with one another. The following illustration will serve to show the method of reading them:

With prices for 1913 as the base or 100, it is shown that for Australia the price of 46 foodstuffs, as reported from 30 towns in the Commonwealth, had increased 1.5 per cent in 1914; 21.7 per cent in 1915; 42.1 per cent in January, 1916; 49 per cent in February, 1916; 48.1 per cent in March, 1916; and 43.6 per cent in April, 1916.

INDEX NUMBERS OF RETAIL PRICES IN CERTAIN FOREIGN COUNTRIES, 1910 TO 1916.

[Prices for 1913=100.0]

Year and month.	Australia: 46 foodstuffs; 30 towns; weighted.	Canada: 29 foodstuffs; 60 cities; weighted.	France: 13 foods; cities over 10,000 population; weighted.	Great Britain: 23 foodstuffs; weighted.	Italy: 7 foodstuffs; 40 cities.	Netherlands: 29 articles; 40 cities.	New Zealand: 59 foodstuffs; 25 towns; weighted.	Norway: 27 (24 foods) commodities; 21 towns.	Sweden: 56 commodities; 44 towns; weighted.
1910		94.8		95.3		99.1	95.6		94.0
1911		97.3	[1] 100.4	95.3		100.9	94.8	87.7	93.7
1912	107.8	100.0		99.7	102.2	104.4	98.1	94.7	99.8
1913	100.0	100.0	[1] 100.0	100.0	100.0	100.0	100.0	100.0	100.0
1914	101.5	105.4	[2] 99.4	101.7	98.4	101.8	105.0	100.9	102.5
1915	121.7	107.3	[1] 109.5	129.4	115.0	124.6		118.4	123.6
1916:									
January	142.1	112.7			127.9	134.2	119.2	139.5	
February	149.0	114.6	132.3		127.8	136.0	119.9	142.1	
March	148.1	114.0			128.2	138.6	120.3	147.4	
April	143.6	113.8			127.7	141.2	121.3	153.5	
May		114.2			128.9	143.9	122.4	162.3	
June		116.1				147.4	123.0	172.8	136.9
July		115.3					123.0		
August		117.6							

[1] First quarter.

[2] Third quarter.

AUSTRALIA.

The cost of living in Australia, meaning the cost of 46 food articles of ordinary consumption, based on average prices in 30 towns in Australia, had increased 31 per cent in May, 1916, as compared with July, 1914, according to recent statistics of the Commonwealth Bureau of Census and Statistics, as contained in the January-March number of its quarterly labor bulletin. The following table shows the variations from 1911 in retail prices of food and groceries since July, 1914, the last month prior to the outbreak of the war, by means of index numbers of retail prices in 30 towns weighted on the basis of the average expenditure for these commodities in the six capital towns:

INDEX NUMBERS OF RETAIL PRICES OF FOOD AND GROCERIES (46 ITEMS) IN 30 TOWNS FOR SPECIFIED MONTHS, 1914 TO 1916.

[Weighted average for 6 capital towns in 1911=1,000.]

Month and year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Weighted average for Commonwealth.
1914.							
July	1,165	1,105	1,082	1,247	1,412	1,201	1,164
1915.							
March	1,243	1,219	1,230	1,357	1,539	1,305	1,269
April	1,265	1,285	1,313	1,427	1,556	1,372	1,318
May	1,283	1,388	1,359	1,485	1,573	1,399	1,372
1916.							
January	1,535	1,444	1,570	1,511	1,583	1,516	1,504
February	1,597	1,542	1,592	1,577	1,596	1,641	1,577
March	1,578	1,540	1,556	1,580	1,605	1,613	1,566
April	1,523	1,485	1,517	1,557	1,578	1,595	1,520
May	1,522	1,488	1,512	1,586	1,608	1,566	1,524
Increase for May, 1916, over July, 1914, in per cent	30.5	34.7	39.9	27.3	14.0	30.4	30.9

CANADA.

The Canadian Labor Gazette for September, 1916, reports that—

"In retail prices of foods a substantial increase appeared in the weekly budget which includes 32 staple foods. For August the cost was $8.63 as compared with $8.46 in July, $7.78 in August, 1915, and $7.68 in August, 1914. In fuel and light, anthracite coal averaged higher and there were slight rises in soft coal, wood, and coal oil. Rent was also upward in some localities. As compared with prices last year higher levels appeared in all the foods except milk. Potatoes were considerably higher than a year ago, but not much higher than in 1914. Rent averaged nearly the same as in 1915, but lower than in 1914."

The table which follows shows the cost of a week's supply of staple foods in terms of the average prices in 60 cities in the different Provinces of Canada.

COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS IN TERMS OF THE AVERAGE PRICES OF THE CITIES IN EACH PROVINCE.

Province.	1910	1911	1912	1913	1914	1915	Aug., 1914.	Aug., 1915.	July, 1916.	Aug., 1916.
Nova Scotia	$6.817	$6.776	$7.166	$7.289	$7.475	$7.826	$7.494	$7.904	$8.466	$8.513
Prince Edward Island	5.812	5.795	6.107	6.338	6.693	6.817	6.543	6.602	7.367	7.394
New Brunswick	6.548	6.836	7.130	7.041	7.443	7.682	7.592	7.686	8.497	8.579
Quebec	6.331	6.457	6.968	6.870	7.158	7.387	7.192	7.240	8.221	8.297
Ontario	6.504	6.666	7.251	7.293	7.479	7.676	7.531	7.682	8.551	8.722
Manitoba	7.462	7.405	7.884	7.873	8.149	8.071	7.997	7.762	8.345	8.424
Saskatchewan	7.859	8.083	8.164	8.259	8.327	8.299	8.024	8.105	8.678	8.710
Alberta	7.998	8.081	8.147	8.327	8.266	8.209	7.984	7.787	8.224	8.716
British Columbia	8.321	8.789	9.028	9.128	7.606	8.867	9.355	8.723	9.014	9.201
Total (all Provinces)	6.954	7.138	7.339	7.337	7.731	7.866	7.679	7.781	8.457	8.627

DENMARK.

The Danish statistical office has made several special inquiries concerning the increase in the cost of living consequent upon the war. The most recent inquiry relates to July, 1916. The cost of a household budget of an average workingman's family, weighted according to actual consumption, and based upon budgetary studies made by the statistical office during the year 1910 in the city of Copenhagen, is expressed in terms of the current prices for any particular month, and comparisons made for different periods. On this basis the statistical office calculates that, from the outbreak of the war to July, 1916, the food expenses of an average workingman's family increased approximately 46 per cent and other expenses about 27 per cent, the total average increase being about 36 per cent. The results of the five investigations of the increase in the cost of living since the outbreak of the war are set forth in the following statement:

RELATIVE COST OF LIVING FOR WORKINGMAN'S FAMILY IN COPENHAGEN AT INDICATED PERIODS SINCE THE OUTBREAK OF THE WAR.

Date.	Food.	Other expenditures.	Total.
July, 1914	100	100	100
July, 1915	128	106	116
October, 1915	132	109	120
February, 1916	134	116	124
July, 1916	146	127	136

FRANCE.

The April issue of the official journal of the French statistical office (Bulletin de la statistique Générale de la France) shows an increase of 33 per cent in the cost of living in French towns of over 10,000 inhabitants (not including Paris) during the first quarter of 1916 as compared with the third quarter of the year 1914 after the war broke out. This estimate is founded upon continued investigations of the retail prices of 13 commodities of ordinary consumption as returned from the several cities in question. The prices obtained for each article are multiplied by the respective quantities consumed by an average workingman's family as disclosed by an investigation in 1910 by the statistical office (see MONTHLY REVIEW, July, 1916, p. 84), and the results added to secure the total cost of the budget at the desired period of time.

Below are shown the results of these investigations since the first quarter of 1911, for all of France and for each geographical division. An index number has been calculated for "All France," with the cost of the budget for the third quarter of 1914 as the base or 100.

COST PER YEAR, IN DOLLARS, OF A FAMILY BUDGET OF 13 STAPLE ARTICLES OF FOOD, FUEL, AND LIGHTING IN TERMS OF THE AVERAGE RETAIL PRICES IN FRENCH CITIES OF OVER 10,000 INHABITANTS, EXCEPT PARIS, BY GEOGRAPHICAL DIVISIONS AND FOR ALL FRANCE AT INDICATED PERIODS OF TIME, 1911 TO 1915.

Period.	All France.		Geographical divisions.				
	Amount.	Relative cost.	North.	East.	South-east.	South.	West.
First quarter, 1911	$195.70	101.0	$204.39	$193.39	$212.88	$195.90	$191.65
First quarter, 1913	194.93	100.6	201.30	190.88	199.95	200.33	190.11
Third quarter, 1914	193.77	100.0	212.11	190.68	196.47	190.68	181.81
First quarter, 1915	213.46	110.2	223.88	213.46	215.20	210.37	205.74
Third quarter, 1915	238.36	123.0	246.85	232.57	237.58	243.37	231.02
First quarter, 1916	257.85	133.1	273.10	246.27	256.11	267.88	245.11

GREAT BRITAIN.

On September 1 the average increase in the retail prices of food in Great Britain since the beginning of the war may be put at 65 per cent, according to the Board of Trade Labor Gazette for September. This percentage makes allowance for the relative importance of the various articles of food in working-class household expenditures and relates to food only. The estimate must not be applied to the total family expenditures, therefore, but only to that proportion which is expended on food.

Summarizing the situation as of September 1, 1916, the Labor Gazette notes an increase of about 4 per cent in retail prices since August 1. During the month the price of butter and flour increased about 10 per cent, of bread 7 per cent, and of bacon 5 per cent. Slight increases were shown for fish, cheese, granulated sugar, and milk.

As compared with a year ago (September 1, 1915), the general level of prices showed an increase of about 22 per cent. Advances recorded in prices of meats ranged from 15 per cent for ribs of beef (domestic) to 33 per cent for cold-storage breast of mutton.

PERCENTAGE INCREASE IN PRICE OF FOOD COMMODITIES IN GREAT BRITAIN ON SEPTEMBER 1, 1916, OVER JULY, 1914.

Article.	Percentage increase from July, 1914, to Sept. 1, 1916.		
	Large towns (population over 50,000).	Small towns and villages.	United Kingdom.
Beef, British:			
Ribs	61	59	60
Thin flank	87	72	80
Beef, chilled or frozen:			
Ribs	83	76	80
Thin flank	102	92	97
Mutton, British:			
Legs	57	54	55
Breast	92	68	80
Mutton, frozen:			
Legs	89	80	84
Breast	123	111	117
Bacon (streaky)	49	42	46
Fish	103	70	87
Flour (households)	59	65	62
Bread	58	50	54
Tea	51	50	50
Sugar (granulated)	166	160	163
Milk	39	32	35
Butter:			
Fresh	48	49	48
Salt	47	49	48
Cheese	45	48	46
Oleomargarine	20	17	18
Eggs (fresh)	86	78	82
Potatoes	55	49	52
Total[1]	68	62	65

[1] Weighted net percentage increase.

ITALY.

The semimonthly Bollettino of the Italian labor office publishes each month a short table of retail prices of seven articles of ordinary consumption, showing average prices in a varying number of cities (40 to 43), as furnished by cooperative stores, local labor unions, and chambers of commerce. Relative prices of these same commodities are also shown in parallel columns, the base from which changes are reckoned being the average prices for the year 1912.

The following table shows the actual and relative prices of the seven commodities for each of the months March, April, May, and June in 1915 and 1916:

ACTUAL AND RELATIVE PRICES OF ARTICLES OF FOOD BASED ON AVERAGE PRICES IN 43 CITIES IN ITALY.

AVERAGE ACTUAL PRICES.

Article.	Unit.	March.		April.		May.		June.	
		1915	1916	1915	1916	1915	1916	1915	1916
		Cents.	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Bread, wheat	Pound	4.2	4.5	4.3	4.3	4.3	4.4	4.1	4.4
Flour, wheat	...do...	4.8	4.9	4.7	4.7	4.7	4.8	4.6	4.8
Macaroni, spaghetti, etc	...do...	5.7	6.5	5.8	6.5	5.8	6.6	5.9	6.6
Beef	...do...	14.2	21.3	14.0	21.0	14.9	21.5	15.7	21.8
Lard	...do...	18.6	24.1	19.2	25.0	19.6	24.9	20.3	24.9
Oil, table	Quart	33.8	42.0	34.9	42.7	35.6	43.1	34.9	42.7
Milk	...do...	6.1	6.8	6.0	6.6	6.1	6.7	6.1	6.8

RELATIVE PRICES. AVERAGE PRICES FOR 1912=100.

Article.	Unit.	March 1915	March 1916	April 1915	April 1916	May 1915	May 1916	June 1915	June 1916
Bread, wheat	Pound	114.3	120.6	114.8	117.2	115.0	118.1	111.5	117.8
Flour, wheat	...do...	123.0	126.2	121.3	122.6	122.8	124.9	118.0	123.5
Macaroni, spaghetti, etc	...do...	116.9	134.4	119.9	134.4	119.9	136.0	120.7	135.8
Beef	...do...	94.2	141.3	93.0	139.5	98.8	143.0	104.0	141.3
Lard	...do...	102.4	132.2	105.2	137.5	107.6	137.0	111.5	136.5
Oil, table	Quart.	92.5	115.0	95.5	117.0	97.5	118.0	95.0	117.0
Milk	...do...	97.6	108.4	96.2	106.1	96.8	106.4	97.0	108.7
All commodities	....	105.8	125.4	106.5	124.9	108.3	126.2	108.2	125.7

NETHERLANDS.

The following table is published in the Journal (*Maandschrift*) of the Dutch statistical office for August, 1916, and presents the yearly relative prices for 1913, 1914, and 1915, based on the average monthly price for 29 articles of daily consumption, and the relative prices for the months of January to July, 1916. The basic prices are those reported by two cooperative associations—one with branches at Amsterdam, Haarlem, Arnhem, Utrecht, and Leeuwarden and the other at The Hague. The average prices reported for 1893 are taken as a base for calculating the relative prices.

RELATIVE RETAIL PRICES IN THE NETHERLANDS, 1913, 1914, 1915, AND JANUARY TO JULY, 1916.

[Average prices, 1893=100.]

Commodity.	1913	1914	1915	January, 1916.	February, 1916.	March, 1916.	April, 1916.	May, 1916.	June, 1916.	July, 1916.
Beans, brown	154	157	175	196	204	211	214	218	221	214
Beans, white	166	176	200	210	210	221	241	255	310	314
Peas, chick	150	161	178	175	175	175	175	181	189	194
Peas, yellow	125	139	157	157	157	157	157	150	157	161
Peas, green	157	143	160	207	213	213	207	207	213	213
Barley, pearl	113	116	142	152	152	152	155	158	161	165
Buckwheat, groats	104	117	171	187	192	192	192	192	196	204
Oatmeal	103	103	137	140	140	140	140	147	153	153
Cheese, Leyden	140	139	160	161	164	164	164	191	187	187
Cheese, full cream	124	125	137	127	124	128	125	130	133	133
Coffee	94	88	91	96	97	99	100	104	103	103
Oleomargarine	127	99	102	102	105	110	111	111	111	111
Flour, rye	85	81	115	119	119	122	122	122	130	133
Flour, wheat	124	129	159	153	153	153	159	165	165	165
Flour, buckwheat	105	110	152	176	176	176	181	181	186	200
Butter	94	97	130	144	144	144	146	147	149	149
Butter, cooking	135	142	207	226	223	228	226	226	226	226
Oil, rape	136	137	192	186	199	208	212	216	216	216
Rice	116	116	128	125	125	131	141	156	141	141
Soda	83	83	117	233	233	250	283	283	283	300
Starch	103	107	130	137	137	143	150	153	167	170
Sirup	100	100	125	132	146	146	150	150	164	161
Sugar, moist	89	91	105	115	115	115	115	115	115	115
Sugar, granulated	85	89	98	100	100	100	100	100	102	102
Tea	112	113	116	120	120	120	119	121	119	119
Vermicelli	121	128	203	207	207	207	207	207	207	207
Soap, white, Bristol	100	100	119	126	123	123	123	123	126	126
Soap, green, soft	87	87	121	129	142	150	154	158	158	158
Salt	88	80	90	90	90	90	90	90	90	90
Average, all commodities	114	116	142	153	155	158	161	164	168	170

NEW ZEALAND.

According to a recent number of the Journal of the New Zealand Department of Labor, the cost of living as related to family expenditures for food had increased 18 per cent in the second quarter of 1916 as compared with the second quarter of the year 1914, and 17 per cent in the first quarter of 1916 as compared with the corresponding quarter of the year 1914. In 1915, compared with 1914, the cost of living was 12 per cent higher during the first quarter and 22 per cent higher in the second quarter.

These percentage increases are based on retail prices of 59 food products as returned from 25 towns in New Zealand, and are weighted according to the average consumption of each article as ascertained by a study of the total average amount consumed in the country during the 10-year period 1905–1914.

The index number of the department for the earlier years and down through 1913 was based on prices collected monthly from 50 retailers in the four principal cities, and is weighted according to the method indicated above. It is found by dividing the aggregate expenditure for the commodities or group of commodities by the average aggregate annual expenditure for these same commodities or groups of commodities during the base period 1909–1913. Beginning with 1914 the compilation of index numbers of retail prices was extended to include 25 cities, each city being given its proper importance or weight in affecting the general price level, according to its population. The results for 1912 and 1913 and for each quarter of 1914, 1915, and 1916 are contained in the following table:

INDEX NUMBER OF RETAIL PRICES OF FOODSTUFFS IN NEW ZEALAND, 1912 TO 1916.[1]

[Base: Average aggregate annual expenditure in four chief centers, 1909-1913=1,000.]

Year or quarter.	Groceries.	Dairy produce.	Meat.	Total of three food groups.
1912	1022	1029	1001	1017
1913	1023	1050	1047	1037
1914:				
First quarter	1039	1042	1107	1063
Second quarter	1038	1089	1117	1077
Third quarter	1071	1032	1177	1096
Fourth quarter	1161	1017	1221	1146
1915:				
First quarter	1210	1100	1213	1186
Second quarter	1201	1212	1171	1194
Third quarter	1204	1170	1223	1203
Fourth quarter	1219	1133	1332	1238
1916:				
First quarter	1209	1187	1321	1242
Second quarter	1184	1330	1330	1268

[1] The index numbers for 1912 and 1913 relate only to the 4 principal cities; those for 1914, 1915, and 1916 are based on returns from 25 principal towns. The number of articles returned is 59.

NORWAY.

Official reports from the Norwegian labor office show that the general level of prices of 27 different articles, for which prices are reported from 21 industrial centers, rose 97 per cent in June, 1916, as compared with the prevailing level of 1911. Compared with 1911 prices were 15 per cent higher in 1914; 35 per cent higher in 1915; with a continuing increase to 59 per cent in January, 1916; 62 per cent in February; 68 per cent in March; 75 per cent in April; 85 per cent in May; and 97 per cent in June. The largest rate of increase has been shown by meats and by coal and coke.

Compared with prices in July, 1914, the general price level of June, 1916, for 33 articles of household consumption increased 71 per cent. In calculating this average percentage increase no account is taken of the fact that these articles are consumed in greatly varying quantities. If consideration is given to the quantity of each article consumed by an average family, of about five persons, whose income ranges from 1,200 to 1,750 crowns ($321.60 to $469), as ascertained by an actual study of family budgets by the Norwegian labor office in 1912-13 in six of its principal industrial cities, the increase comes to 61 per cent.

RELATIVE PRICES IN NORWAY OF 9 GROUPS OF ARTICLES OF HOUSEHOLD CONSUMPTION, AS RETURNED FROM 21 INDUSTRIAL CENTERS.

[Average prices July, 1914=100.]

Group of articles.	Relative prices in—			
	March, 1916.	April, 1916.	May, 1916.	June, 1916.
Meats (beef, mutton—8 varieties)	149	161	179	192
Pork (3 varieties)	154	154	162	164
Dairy products (butter, eggs—5 varieties)	132	129	127	133
Cereals (17 varieties)	173	175	176	177
Coffee (3 varieties)	106	103	103	105
Sugar (3 varieties)	142	156	169	183
Petroleum (3 varieties)	130	145	148	149
Coal and coke (2 varieties)	199	210	229	273
All commodities	149	155	162	171

SWEDEN.

According to the journal of the Swedish labor office (No. 7, 1916), the average price of 51 articles of ordinary household consumption showed an increase of 48 per cent during the second quarter of 1916, as compared with average prices prevailing in July, 1914. These prices are based on returns received from 44 industrial centers throughout the kingdom. Considering commodities separately, increases in prices fluctuated very considerably, as from June, 1914, to June, 1916, imported coal increased 143 per cent in price, beans 133 per cent, and salt herring 121 per cent. Sugar showed the lowest increase—6 per cent.

In Stockholm the cost of a family budget consisting of those articles included in the returns for retail prices had increased 39 per cent in June, 1916, as compared with the average cost for the seven-month period January to July, 1914.

In this statement consideration is given to the amounts consumed by an average family of about 4 persons, with income of about 2,000 crowns ($536), as ascertained by a special investigation of the labor office, 1907–8. The amount of such an annual budget as based on average retail prices, January to July, 1914, was 793.43 crowns ($212.64), while in June, 1915, it was 1,006.94 crowns ($269.86), and in June, 1916, 1,106.41 crowns ($296.52), increases, respectively, of 213.51 crowns ($57.22) and 312.98 crowns ($83.88).

The table which follows shows the relative cost of 6 groups of commodities of ordinary household consumption as reported for the third and fourth quarters of 1914, for each of the quarters of 1915, and the first two quarters of 1916, based on the average monthly retail prices of 51 commodities as reported from 44 industrial centers in Sweden.

RELATIVE PRICES OF GROUPS OF COMMODITIES OF HOUSEHOLD CONSUMPTION, AS REPORTED FROM 44 INDUSTRIAL CENTERS IN SWEDEN, THIRD QUARTER, 1914, TO SECOND QUARTER, 1916.

[Average prices July, 1914=100.]

Commodity.	Third quarter, 1914.	Fourth quarter, 1914.	First quarter, 1915.	Second quarter, 1915.	Third quarter, 1915.	Fourth quarter, 1915.	First quarter, 1916.	Second quarter, 1916.
Dairy products, including eggs and oleomargarine (10 commodities)	101	110	112	114	124	141	143	146
Bread, flour, and cereals (11 commodities)	109	118	124	135	133	134	124	125
Meat (8 commodities)	98	95	106	122	137	140	144	157
Fish (9 commodities)	102	102	108	102	118	142	150	152
Other foods (6 commodities)	103	112	128	135	129	130	137	133
Fuel and lighting (7 commodities)	107	108	112	119	135	151	159	167
All commodities (51)	103	108	114	121	129	138	143	148

The following table shows the annual cost of a budget of household commodities required for the needs of an average family, of about four persons, whose annual income is approximately 2,000 crowns ($536), based on the average monthly retail prices for 44 centers in Sweden, January to July, 1914, June, 1915, and June, 1916, together with the per cent of increase in June, 1915, and June, 1916, over the period January to July, 1914:

COST OF ANNUAL BUDGET OF HOUSEHOLD NECESSITIES OF A FAMILY AVERAGING 4 PERSONS BASED ON THE AVERAGE MONTHLY RETAIL PRICES OF 56 COMMODITIES REPORTED FROM 44 TOWNS IN SWEDEN, JANUARY TO JULY, 1914, AND FOR JUNE, 1915, AND JUNE, 1916.

Group of commodities.	Amounts.			Per cent of increase over January-July, 1914, in—	
	January to July, 1914.	June, 1915.	June, 1916.	June, 1915.	June, 1916.
Dairy products, eggs, and oleomargarine	$76.12	$94.17	$107.05	23.7	40.6
Bread, flour, and cereals	42.96	59.22	54.92	37.9	27.9
Meats	41.82	59.23	67.66	41.6	61.8
Fish	6.51	5.94	10.90	[1] 8.8	67.4
Other foods	28.39	31.46	30.90	10.8	8.8
Fuel and lighting	16.85	19.84	25.09	17.8	48.9
All commodities	212.64	269.86	296.52	26.9	39.4

[1] Decrease.

SWITZERLAND.

The Zeitschrift für schweizerische Statistik und Volkswirtschaft, Berne, published by the Swiss Statistical Society, in its second number for 1916, presents a table from which it may be gathered that the cost of living of an average family in Switzerland in June, 1916, was 39.5 per cent higher than in June, 1914. The cost of 33 food articles which entered into a family's budget had increased 40.6 per cent during the same period, while other necessities had increased 29 per cent. These results are based on returns of retail prices from 266 cooperative stores, as compiled by the director of the cooperative league. A true budget is made by multiplying the average retail prices so reported by the amount of each of the articles consumed by an average family, consisting of two adults and three children under 10 years of age.

The following table is a summary of the results of investigations for the months of June, 1914, 1915, and 1916:

COST OF LIVING OF AN AVERAGE FAMILY IN SWITZERLAND, AS OF THE MONTHS OF JUNE, 1914, 1915, AND 1916.

Group of articles.	Annual expenditure of an average family on the basis of average prices in—			Per cent of increase over June, 1914, in—	
	June, 1914.	June, 1915.	June, 1916.	June, 1915.	June, 1916.
Dairy products	$63.86	$67.81	$75.56	6.2	18.3
Fats	7.82	9.35	12.87	19.6	64.6
Cereals	41.52	57.37	64.77	38.2	56.0
Beans, peas, lentils, etc	1.84	2.89	3.17	57.1	72.3
Meats	38.46	44.57	54.71	15.9	42.3
Eggs	7.72	10.81	13.90	40.0	80.0
Potatoes	6.75	7.72	9.65	14.4	42.9
Sugar and honey	7.35	8.96	13.59	21.9	84.9
Beverages (tea, coffee, chocolate)	7.03	7.38	8.20	5.0	16.6
Total foodstuffs	182.35	216.86	256.42	18.9	40.6
Fuel and lighting, and soap	19.03	21.90	21.56	15.1	29.1
Grand total	201.38	238.76	280.98	18.6	39.5

Official data from the statistical office of the Canton Basel City were published in the journal referred to above, showing that in April, 1916, beef was 32 per cent higher than in April, 1914, veal 30 per cent, fresh pork 35, bread 43, and eggs 41. The simple price level (unweighted) of 8 articles was 29 per cent higher in April, 1916, and 14 per cent higher in April, 1915, than in April, 1914. These data are based on retail prices of eight food commodities reported from 30 cities. The table which follows shows the average prices for each quarter from April, 1914, to April, 1916, inclusive, and the per cent of increase from April, 1914, to April, 1915 and 1916.

PRICES OF SPECIFIED ARTICLES OF FOOD BASED ON AVERAGE PRICES IN 30 CITIES IN SWITZERLAND, JANUARY, 1914, TO APRIL, 1916, AND PER CENT OF INCREASE IN APRIL, 1915 AND 1916, OVER APRIL, 1914.

Article.	Unit.	1914				1915				1916		Per cent of increase over Apr., 1914, in—	
		Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Jan.	Apr.	Apr., 1915.	Apr., 1916.
		Cts.	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*	*Cts.*		
Beef (with bones)	Pound	17.3	17.3	17.5	17.5	17.2	18.9	21.8	21.8	21.5	22.8	9	32
Veal (with bones)	...do...	20.9	20.2	22.1	20.7	19.9	22.7	24.2	26.3	23.8	26.2	12	30
Pork, fresh (with bones)	...do...	21.4	21.4	21.3	20.2	21.3	24.3	24.9	25.2	26.7	28.9	13	35
Milk	Quart.	4.2	4.2	4.2	4.1	4.0	4.1	4.4	4.4	4.5	4.5	[2] 2	7
Table butter	Pound	32.2	32.0	31.6	31.0	33.1	34.5	34.8	37.3	40.8	41.7	8	30
Cheese, Emmentaler, first quality.	.. do...	20.3	20.4	20.3	19.9	20.1	21.5	22.3	22.7	23.3	23.4	5	15
Bread (quality in common use).[1]	...do...	3.2	3.2	3.2	3.5	3.7	4.2	4.3	4.0	4.2	4.6	31	44
Eggs, domestic	Dozen.	36.8	24.3	26.6	34.5	41.0	33.6	37.1	44.7	45.9	34.3	38	41

[1] Since October, 1914, whole-wheat bread.

[2] Decrease.

FIFTH ANNUAL CONFERENCE OF THE NATIONAL HOUSING ASSOCIATION, OCTOBER 9-11, AT PROVIDENCE, R. I.

The Fifth Annual Conference of the National Housing Association was held in Providence, R. I., on October 9, 10, and 11. This association is composed of many different interests. There are those who are trying to improve housing conditions by means of legislation—the adoption of health ordinances, improved tenement-house codes, city-planning legislation, and State aid in home building. Closely connected with this group are city and State health officers and tenement-house inspectors. Then there are those whose primary interest is in the building and care of workingmen's dwellings—model tenements, improved housing enterprises, and employers' housing developments. Due to the pressing need which exists at the present time for more dwellings in industrial communities, the sessions were largely devoted to a consideration of the problems of industrial housing.

One delegate stated that the present house famine was due to the fact that a sanitary four-room house at a rent within reach of the average workingman could not be made to yield over 4 or 5 per cent under present methods of building, and that the average investor is not satisfied with less than 10 per cent net on his money. The following methods for reducing this house famine were discussed: (1) Reduce the size of house provided; (2) increase the rent; (3) reduce the cost of construction; (4) induce investors to accept a reduced percentage of return; (5) discover some other means of providing houses.

Mr. Perry R. MacNeille, a New York architect, in his paper, "Industrial Housing—What Types of Houses to Build," said: "In designing houses for married men the requirements vary with the number of children and with their age, but as these conditions are continually changing, average conditions must be met. Under average conditions two bedrooms, with a parlor so placed that it can be equally available for a bedroom, may be considered as the proper size for the majority of the houses. If the houses are for clerks and foremen, a separate dining room and kitchen are necessary; otherwise a large kitchen and living room combined are preferable." As regards rents the same speaker said: "If we take the average experience both in America and England, it will be found, I think, that a fair average rent for a man to pay is one-fifth of his monthly income; and if he is purchasing his home on the installment plan, his payments can be increased to one-quarter of his income; that is, a man receiving $2.50 a day could afford to pay $13 a month rent, or $16 in monthly installments on the purchase price. We would then have, in such a case, if we capitalized the yearly rental at 8 per cent,[1] which allows for interest, management, taxes, and repairs, a total desirable investment of $2,000 for house and land complete. At the present time it is probably not possible in active manufacturing centers to keep as low as these figures."

Mr. John Nolen, city planning expert, declared that the minimum desirable house of four or five rooms can not be provided in the United States for less than $1,800 or $2,000; that is, for house and lot, with street improvements, essential public utilities, and neighborhood recreation. Such a house must rent for $15 a month, and he declared that more than one-half of all the fathers of workingmen's families earn less than $15 a week, and that unless it is possible to reduce the accommodations or increase the rent, the construction cost must be lowered or the per cent of return on capital decreased.

Mr. Grosvenor Atterbury, architect, from New York City, in his paper "How to Get Low-Cost Houses," spoke of the need of a scientific building code. He gave illustrations showing where the present code caused unnecessarily expensive construction. The major part of his paper dealt with the need of research in economic home construction. He said: "It would be difficult to find a practical art which throughout all of the centuries of man's civilization has made slower progress than the art of home building. It is a curious fact that scientific and cooperative principles have been practically applied to the production of almost every other item in the poor man's living account but the second largest single one—that of his housing. His bread, his clothing, and his watch are factory products, largely guaranteed—sometimes by government. His house is usually 'custom-made' and bought at the mercy of a speculative builder." Mr. Atterbury then gave an illustrated talk showing the research work that he had been engaged upon under the auspices of the Russell Sage Foundation during the past seven or eight years. He showed photographs of the construction of houses out of large concrete sections which were made in the factory and put in place by means of a large crane. In conclusion he said, "While in one sense we have only scratched the surface of the problem, in another sense we have passed the experimental stage, and I think are ready for commercial development."

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[1] Mr. John Nolen, city planning expert, said that he considered 8 per cent gross to be entirely inadequate to return a fair net profit on the investment and that 10 per cent, or where the taxes were very low, possibly 9 per cent would be the minimum gross rent that would return a fair net profit. Mr. Owen Brainard, architectural engineer and adviser to the United States Steel Corporation, stated, "Many real estate managers in industrial towns allow as much as 5 per cent per annum for the maintenance charges on low-cost housing." Mr. Rice, real estate manager for the Pittsburgh Crucible Steel Co., stated that the maintenance charges were unusually heavy in an industrial town, due to the frequent moving of tenants.

Mr. Owen Brainard, architectural engineer and adviser to the United States Steel Corporation, in his paper "Types of Construction for Low-Cost Houses," said: "I look for the development of clay production wherever there is a clay deposit adjacent to a considerable community; and, indeed, the whole range of building materials and methods will undoubtedly be much affected in the future by this development of clay manufacture. At the present time the use of clay products is much restricted by heavy freight charges due to the limited development of manufacturing." Later on, speaking of concrete construction, he said: "It seems conservative to assume that we will finally evolve some system of uniform units which will greatly reduce the cost of forms, and this will undoubtedly lead to the general adoption of the poured concrete wall. Thus far there has been but one method developed which obviates the necessity of furring the inside face of the exterior walls. In a monolithic wall without voids such furring is absolutely necessary, and there have been many disastrous failures due to the attempt to evade this requirement. Concrete-block construction is excellent and produces economical results, but the danger here is in the too rapid manufacture of the blocks, with a necessarily dry mixture, which produces a porous block highly absorbent of water. The quickly made porous concrete block can be successfully used as a base for stucco, and as the voids can be properly arranged, the plastering can be applied directly to the inner surface. Even with this there should be a waterproofed coating on the inside face before the plaster is applied."

In the discussion following this paper it was brought out that where concrete or hollow tile blocks were used without stucco there was often a leakage through the vertical joints and around the windows. It was stated by Mr. Perry R. MacNeille, who has made a study of this form of construction, that this leakage could be prevented by greater care in laying up the wall or applying a waterproof coating. The leakage around the windows could be stopped by packing with some resilient material. Miss Mead, a New York architect, spoke of an interlocking brick that would do away with vertical leakage, and an interlocking hollow tile was spoken of that was so constructed that it would not have any leakage through the vertical joints. None of the delegates claimed to have discovered the solution of the problem of cheap building construction.

In regard to a low per cent of return on capital invested in housing, Mr. Owen Brainard, in his address referred to on page 62, stated: "It is natural and indeed unavoidable that the housing movement should be led by philanthropists; nevertheless, no housing can be considered successful if it does not meet the requirements of the property owner or investor. I do not include in the philanthropic manifestations those industrial operations which have been carried on by manufacturers with a view to providing low-cost housing for employees, with a very low percentage of return upon invested capital, or indeed with no return, because these efforts produce real and substantial returns in the increased efficiency of the operating staffs and in the reduction of the great economic losses arising from the constant change in the staff. I recently had occasion to examine the housing conditions in one of the largest industrial towns in the country, where the conclusion was unavoidable that the solution of the problem of permanent employment was to be found in an increased improvement of the housing facilities."

Mr. Henry Sterling, secretary of the Massachusetts Homestead Commission, spoke on State aid in home building. He told of the passage of an amendment to the State constitution in 1914 permitting the loaning of State funds for home building. Mr. Arthur C. Comey, city planner and member of the Massachusetts Homestead Commission, explained that State aid to home ownership would not cost the taxpayers anything, as the State merely loaned its credit, under proper safeguards, to those who desired to own a home.

Mr. Andrew Wright Crawford, secretary of the Art Jury, Philadelphia, urged city help in home ownership. He suggested that the city guarantee loans on home property. He stated that the city would make money through increased property values by encouraging home ownership.

PROPOSED LEGISLATION IN SWEDEN FOR THE SETTLEMENT OF INDUSTRIAL DISPUTES.

Repeated attempts have been made at legislation for the settlement of industrial disputes in Sweden since 1887, which finally resulted in the enactment of the law of December 31, 1906, creating a group of conciliators, one for each district into which the country was divided for that purpose. As simple conciliation was, however, not found adequate, a royal commission was appointed in 1907 (there had been others appointed prior to this). The report of this commission resulted in the draft of a law which proposed giving legal standing to collective agreements, provided for the creation of a special arbitration tribunal, and extended the provisions for conciliation and the making of collective agreements; but all attempts at legislation on the subject failed to progress beyond the introduction of bills in Parliament.

A recent report[1] by the labor department is the result of an examination of the whole matter of the settlement of industrial disputes by the Swedish Government. The report reviews the history of industrial disputes in Sweden, analyzes the principles involved in legislation for their settlement, and submits a proposed law covering the whole ground.

The past history of conciliation shows difficulties on the part of conciliators in getting information of a dispute before it results in a strike or lockout; thus, from 1907 to 1913, 362 disputes were reported, 242 eventuating in strikes, and in 217 instances the conciliators failed to get notice until after the occurrence of the strike. Although there is need therefore of some amendment in the conciliation law, yet the department of labor does not feel warranted in arriving at any definite conclusion as to the success of compulsory arbitration in those countries where it has been tried (Norway, Australia, and New Zealand).

However, there is a demand for the more expeditious and expert settlement of disputed points in labor contracts; this demand has grown more insistent, particularly since June, 1915, when the highest court declared that a collective contract entered into between employers and employees has standing at law.

The new legislation proposed aims to strengthen the hands of the conciliators and to make possible judicial enforcement in certain classes of disputes; it affects both ordinary individual labor contracts (*arbetsavtal*) and collective agreements (*kollektivavtal*). It is provided that collective agreements must be in writing to have legal effect and shall not continue in force longer than five years; but for not less than one year if not otherwise specified in the agreement. A collective agreement is defined as an agreement between an employer or an association of employers and a trade-union, trade federation, or similar association of workmen affecting those conditions of work which may be made the subject matter of an ordinary contract of labor. Anything presumed or understood in a collective agreement, and concerning which disputes may arise, shall at arbitration be understood as implying what is actually the case in similar occupations or in the same locality for which the agreement is applicable.

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[1] K. Socialstyrelsen. Underdånigt Utlåtande med Förslag till Lag om vissa Åtgärder till Främjande av Arbetsfred. Stockholm, 1916. 63 pp.

Section 6 of the proposed law provides that during the continuance of the collective agreement, and notwithstanding anything to the contrary in the agreement, no employer or employee or association of such who is bound by the agreement, shall attempt a strike or lockout or similar breach of the agreement the purpose of which is to secure a change in the agreement, to enforce an interpretation of its nature or legal effect, or to secure changes in working conditions contemplated to become effective after the stated term of the agreement.

The proposed law accepts the principle of compulsory investigation by prohibiting a strike unless he has given notice of at least seven days. The law also prohibits a strike for a period of two days after notification of the purpose of a conciliator to intervene for the settlement of the dispute.

The breach of a collective agreement or of the provisions of this law is apparently not made a criminal offense but is made subject to a fine, the measure of which is the nature of the fault and the injury caused. If several persons are involved in the breach of an agreement, then the amount of the fine is assessed according to the degree of culpability on the part of each.

A special arbitration tribunal is to be appointed by the Crown, consisting of seven members and including representatives of both employers and employees.

If enacted, this law would repeal the existing conciliation act of December 31, 1906, and become applicable on January 1, 1918.

EXTENSION OF UNEMPLOYMENT INSURANCE IN GREAT BRITAIN.

The British scheme of insurance against unemployment under Part II of the National Insurance Act, 1911, went into effect July 15, 1912. A description of this scheme, as amended by the National Insurance (Part II Amendment) Act, 1914, appeared in the MONTHLY REVIEW for July, 1916. Its objects as there shown are to provide compulsory unemployment insurance for workmen in certain specified trades and to encourage voluntary insurance against unemployment by money grants from State funds to associations of persons in all trades and occupations paying out-of-work benefits.

The trades compulsorily insured under the act of 1911 are as follows:

1. *Building trades.*—Construction, alteration, repair, decoration, or demolition of buildings, including manufacture of wood fittings commonly made in builders' workshops.

2. *Construction of works.*—Construction, reconstruction, or alteration of railroads, docks, harbors, canals, embankments, bridges, piers, or other works of construction.

3. *Shipbuilding.*—Construction, alteration, repair, or decoration of ships, boats, or other craft by persons other than members of ship crews, and manufacture of wood fittings commonly made in shipyards.

4. *Mechanical engineering.*—Including manufacture of ordnance and firearms.

5. *Iron founding*, whether included under foregoing headings or not.

6. *Construction of vehicles.*—Construction, repair, and decoration of vehicles.

7. *Sawmilling (including machine woodwork)* carried on in connection with any other insured trade or of a kind commonly so carried on.

Foremen other than manual workmen, clerks, apprentices, and persons under 16 years of age are excluded.

Additional amendments to the principal act materially extending the scheme for compulsory insurance against unemployment were passed March 16, 1915, and July 19, 1916.

The amending act of 1915 extends the application of the scheme to workmen employed abroad during the present war and for one year thereafter, in the trades insured under the act of 1911, on work connected with or arising out of the war.

The amending act of 1916, known as the National Insurance (Part II) (Munition Workers) Act, 1916, provides for temporary insurance against unemployment of the following additional groups of workmen:

(1) Workmen engaged on or in connection with munitions work as defined by the Munitions of War Acts, 1915 and 1916, except such classes of such work as the board of trade may by order exclude. Munitions work, according to the definition referred to, may be briefly described as the manufacture or repair of any articles intended or adapted for use in war, or parts of such articles, and any materials specified in orders made by the Minister of Munitions. Up to July 18, 1916, such orders had included balloon fabric, constructional steel, fire brick, glass for constructional purposes, glass for optical purposes, lead compounds, magnesite brick, materials re-

quired for or for use in the manufacture of explosives, silica brick, worked timber, and card clothing.

(2) All workpeople in the following trades, whether engaged in munitions work or not:

1. The manufacture of ammunition, fireworks, and explosives.
2. The manufacture of chemicals, including oils, lubricants, soap, candles, paints, colors, and varnish.
3. The manufacture of metals and the manufacture or repair of metal goods.
4. The manufacture of rubber and goods made therefrom.
5. The manufacture of leather and leather goods.
6. The manufacture of bricks, cement, and artificial stone and other artificial building materials.
7. Sawmilling, including machine woodwork, and the manufacture of wooden cases.

In any establishment where some workmen are insured under the act of 1916, any other workman may, with his employer's consent, be treated as if he were employed in a trade insured under the act.

The Board of Trade may further extend by order the provisions of the act of 1916 to any other trade or branch of a trade in which a substantial amount of munitions work or other work for war purposes is carried on. The extension of the insurance to new trades and to munitions work by the act of 1916, as has been stated, is temporary only. Liability of employers and workmen to pay contributions is to continue for a period to be determined by the Board of Trade but not longer than three years from the end of the present war or five years from September 4, 1916, whichever period is the longer. The right to receive unemployment benefits is to continue for a further six months or for such further period as the board may fix.

Any deficiency in the amount of the unemployment fund when benefits cease to be payable under the act of 1916 is to be paid from Government funds. The provisions of the principal act as to contributions and unemployment benefits are not subject to modification in connection with the act of 1916 unless such modification would have been necessary if the latter act had not been passed.

In determining the question of insurability the nature of the work in which the workpeople are engaged, rather than the business of their employer, must be considered. Such questions are determined by an umpire appointed by the Crown.

Workpeople employed in the trades insured against unemployment under the act of 1911 are not affected by the new act.

Under a regulation made in 1912, which also applies to workmen insured under the act of 1916, where a workman has been employed by one employer partly in and partly not in an insured trade and contributions have, by arrangement between the employer and workman, been paid as if the whole employment were in an insured trade, such contributions are deemed as having been duly paid in respect of employment in an insured trade.

The following provisions applying to employers and workpeople in the trades insured under the act of 1911 do not apply to those insured under the act of 1916:

(1) Refunds to employers of 3 shillings (73 cents) for each workman for whom at least 45 contributions have been paid during the insurance year; (2) refunds to each workman, who has made 500 contributions and has reached the age of 60, of all his contributions, less what he may have received as unemployment benefit; and (3) exemptions from paying contributions, both for workmen systematically working short time and their employers, where it appears to the Board of Trade that there is exceptional unemployment.

WORKMEN'S COMPENSATION INVESTIGATION COMMISSION, VIRGINIA.

At its late session (1916) the Virginia Legislature had before it a bill for a workmen's compensation law, but in lieu of its enactment the governor was authorized to appoint a commission to investigate and after examining the laws of the various States upon the subject, "to recommend to the next general assembly such legislation as, having regard to the peculiar conditions of Virginia, will do justice to both employers and employees." The members are to serve without compensation and without provision for expenses.

Appointments made by the governor in accordance with this resolution are as follows:

Hon. C. O'Connor Goolrick, of Fredericksburg, Va.

Lee Long, general manager of Clinchfield Coal Corporation, Dante, Va.

C. H. Perry, of State Federation of Labor, Norfolk, Va.

C. E. Michaels, president Virginia Bridge Co., Roanoke, Va.

R. S. Barbour, manufacturer, South Boston, Va.

Frank Kruck, treasurer Central Trade and Labor Council, Richmond, Va.

H. M. Cousins, of Brotherhood of Railroad Trainmen, Richmond, Va.

RELATION OF RAILROAD EMPLOYEES TO STATE AND FEDERAL COMPENSATION.

A 16-page pamphlet[1] issued on August 18, 1916, by the Pennsylvania Workmen's Compensation Board gives a list of appeals pending before the board involving the question of interstate commerce which, together with all subsequent appeals of this nature, are ordered to be placed upon a "postponed calendar" until the Supreme Court of the United States shall have passed upon the conflict of jurisdiction between Federal and State tribunals. This confusion, it is stated, arises from the fact that Congress by the act of 1908 legislated as to the matter of litigation when both the employer and the injured employee were engaged in interstate commerce, which act applies solely to employees of railroads, whereas since that date many States have enacted workmen's compensation laws the administration of which necessarily conflicts with the Federal statute. In taking this action the board enters upon a discussion of the relation of railroad employees to State compensation, the conflict between Federal and State legislation, the duty of Congress, and the advantage of State regulation.

Declaring that there is no question that when Congress, within its constitutional rights, enters a particular field of legislation it acquires exclusive jurisdiction; that it is equally certain that although Congress may have the power of legislating upon a certain subject, until it exercises that power, the regulation of that subject can be left to the legislatures of the States; and that Congress has no constitutional power to legislate upon purely intrastate matters; the board maintains that Congress should not enact laws affecting railroad employees in intrastate commerce. "A man is no less a citizen of his own State because he is engaged in railroading. The responsibility of the State toward him is not lessened because of the fact that he is employed by a carrier of interstate commodities. Therefore, why will not Congress allow the State to solve the railroad man's troubles as she does those of her citizens engaged in other industrial pursuits?"

The difficulty of determining whether both the injured man and the railroad company were engaged in interstate commerce at the time of the accident is noted as a factor in administering the Federal law, and court decisions are cited indicating a tendency "to construe almost every form of activity on the part of a railroad employee as being in the nature of interstate commerce," thereby leading to the conclusion that "there will be rarely a case where a railroad company can not avoid a State compensation law by pleading 'interstate commerce.'"

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[1] Pennsylvania. Department of Labor and Industry. Workmen's Compensation Board. Relation of railroad employees to State compensation, etc. [Harrisburg, 1916], 16 pp.

When it is remembered that no injured railroad employee can recover under the Federal act of 1908 unless there is evidence of negligence on the part of the defendant, and when it is further borne in mind that only a small percentage of such accidents present any evidence of negligence at all, it becomes perfectly evident that the railroad employees of the United States are, in the main, deprived of the benefits of workmen's compensation laws which are extending their manifold mercies to the wage earners of so many States.

In this connection it is noted that Congress is trying to meet this difficulty by passing a compensation law for employees engaged in interstate commerce, but here again the board suggests the difficulty of determining whether the employee was engaged in interstate commerce and also the difficulty of determining, with two tribunals in each jurisdiction to pass upon compensation for injured workmen, in which forum a given case should be started.

This act would provide very little relief to approximately 2,000,000 men engaged in railroading and its allied pursuits, who would be deemed to be under interstate commerce * * *, for the reason that it places a premium upon jury trials. The delays then incident to the administration of this act would be quite as great as those that existed in our common law courts before the adoption of the compensation laws. This act likewise would place upon the Government huge expenses of administration.

It is believed that these difficulties would be solved by Congress repealing the Federal employers' liability act of 1908.

The happiness, contentment, and welfare of the vast army of railroad workers of the United States will be more promptly and thoroughly secured by allowing them to submit their claims for compensation to State tribunals than by any scheme that can be devised by Congress.

Attention is called to the fact that one railroad system in Pennsylvania is solving the difficulty by applying the schedules of the Pennsylvania workmen's compensation act to each case of injury.

(1) As to cases which are clearly intrastate, the Pennsylvania act is followed by effecting an agreement with the claimant for the periodical payments provided in the act for that particular case.

(2) As to cases which are clearly interstate, or where there is any doubt as to the character of the commerce in which the employee was employed at the time of the accident, (*a*) where a claim petition has been filed, an agreement for a lump-sum payment is made, based on the schedule of the act, commuted by the board under sections 316 and 424, which is paid over to the injured employee, or, in case of death, to his personal representative, who signs a general release therefor. By this means protection both under the Federal and the State laws is secured. (*b*) Where no claim petition has been filed this company endeavors to effect a settlement on the basis of the schedule provided in the act, commuted to a lump-sum payment, taking a general release therefor, and notifying the compensation bureau of such settlement so that a proper record of the same can be kept by its department.

STATE INSURANCE COMMISSIONERS AND SOCIAL INSURANCE.

The social insurance problem was much in evidence at the forty-seventh session of the National Convention of Insurance Commissioners held in Richmond, Va., September 26 to 29 inclusive. The discussion of State compulsory social insurance by the insurance commissioners at an early date was planned in a resolution introduced by Rufus M. Potts, State superintendent of insurance for Illinois, at the St. Louis convention in December, 1915.

The president, Burton Mansfield, insurance commissioner of Connecticut, plunged the Richmond convention into the midst of the controversy in his opening address, taking as his subject "The relation of government to our economic and social interests, with especial reference to insurance."

After discussing the question of private insurance companies, State monopoly of insurance, and State and private competitive insurance, he took up the topic of social insurance, as follows:

> No one matter has been introduced into the deliberations of this body in recent years, it seems to me, which is of greater concern and so general in its extent as the resolution introduced by the superintendent of insurance of the State of Illinois at our meeting in December last in relation to social insurance.
>
> Whether we agree with him or not, we must admit that the question thus raised is of tremendous importance. Its foundation rests on a keener understanding of the common welfare—that welfare which has shaped the course of the workmen's compensation acts now existing and being enforced in 35 States. Ten years ago they were scarcely known to the people and Nation at large; now they are so well established that they seem almost to have existed from a time when the memory of man runneth not to the contrary. The time came very rapidly when we realized that the wear and tear on the human frame in industry was much more entitled to our favorable consideration than the wear and tear on the mechanical frame, and we hastened to provide a remedy. So, too, without now discussing the many questions on their merits, shall we hasten quickly to provide against other dangers and misfortunes of mankind, such as has been done in Europe for a generation. These provisions will be insurance against sickness, disablement, unemployment, maternity, old age and dependency among wage earners. Germany led the way in this respect over 30 years ago, and no other country has pursued so persistent a course or so complete a plan as she has, although substantially all other European countries have followed her example. Naturally, all this has its effect and influence upon us. Mothers' pension provisions have been adopted in a score of States, while old-age pensions, sickness insurance, and unemployment insurance have been agitated in Massachusetts, Wisconsin, New York, and Ohio, at least, and social insurance commissions have been appointed in California and Massachusetts.
>
> A study of the whole subject by the members of this convention is most desirable. We should know and understand fully the scope and character of social insurance; we should be ready to explain what it means, portray its weak points and emphasize its good points, whenever and wherever occasion may require. This presents a different situation from that which exists by

virtue of the established order in the fire, life, and regular accident fields. I do not believe in State insurance here in any way, certainly not to the exclusion of other methods, but a door is being opened for its admission which has not hitherto existed. Social insurance is not necessarily State insurance, as some would think. The mutual-benefit funds of some European countries, found among the industrial workers, are as much social insurance as the State funds in some parts of our own country, which are maintained in connection with our compensation insurance; and the fact that New Zealand sells fire, life, and accident insurance in the same way in which a private company does, does not make such insurance "social."

It does not seem to me that social insurance, when it comes, should be transacted by the State alone. Many of the very people who are most concerned in its adoption, and for whose benefit it will be primarily introduced, are opposed to it. Mr. Frederick W. Mansfield, counsel for the American Federation of Labor, is reported to have expressed himself most emphatically in favor of competitive insurance in casualty cases and opposed to State insurance alone, which he regards as detrimental to the interests of organized labor. What is true of casualty insurance is equally true of other forms of insurance, so far as such other forms may be pertinent and applicable. Competitive insurance is far preferable to State insurance alone, and State compulsory insurance, so frequently advocated in this connection, should come only after all other plans have failed. The public will consent, as I have said in another connection, to the retention of the old methods and organizations so long as those methods and those organizations give fair, just, and reasonable treatment.

I have thus tried to introduce a subject which I regard as of great importance. Here at its inception is an opportunity for concerted action by the States. They are not hampered by precedents. Except in its application to Federal employees, the States have the whole matter of social insurance in their own hands, and there is no warrant or justification for Federal interference here any more than in those forms of insurance with which we are familiar. It has been claimed in this connection that the "general welfare" clause of the Constitution offers an opportunity and paves the way for legislation on this subject by Congress, but except as above indicated I can see no force in such an argument. The phrase "general welfare" can not be taken from its context and made to perform a duty for which it was not intended or applied to a condition to which it bears no relation.

I should have been glad if this convention could have devoted a succession of its meetings to a consideration of this subject in all its bearings. Its beginnings, its growth, its history, and its merits might well have been considered by us. In the absence of this, however, I shall be glad if I have contributed anything to your knowledge and consideration of so great a subject, and I am very sure that when the paper of our fellow member from Illinois is read we shall be edified and enlightened in a remarkable manner, for he has studied the subject of social insurance from all the angles and in all its varieties.

Before us looms a mountain of real endeavor. The question is, Shall we be content to stand beneath it looking upward or shall we try to climb it?

Discussion disclosed that State monopoly of insurance, especially if it had compulsory features, was not popular with the convention, the consensus of opinion being that the State that forced upon its subjects a system of relief of suffering arising from sickness or incapacity of the breadwinners was essentially monarchial if not despotic, no matter what it called itself.

Mr. Potts's paper, entitled "To what extent is social or welfare insurance feasible in the United States and how should it be done," was read at the beginning of the morning session of the convention on the 28th.

He began by saying:

> Being chairman of your committee on social insurance, and also by reason of the inherent importance of the subject itself, I have become greatly interested in universal insurance for the purpose of making secure the economic welfare of every worker and citizen of the United States. I believe it to be the most weighty problem of our time.

A large part of the paper was devoted to proof of the existence of unavoidable poverty and suffering through sickness, accident, unemployment, premature deaths of breadwinners, and hence of the necessity for a system of universal insurance. Mr. Potts showed by estimates from German experience the enormous economic disturbance and financial waste from loss of time alone inflicted by sickness. Having from his point of view established a need for a general insurance which would not select only the healthy and "preferred risks" as a basis of money making, and thus exclude the very ones who were most in need of protection from a social point of view, he took up the constructive part of his theme. Below will be found liberal extracts from this part of his address:

> Naturally the next question is, "What is the best way of relieving this suffering?"
>
> In former ages the only method was neighborly assistance and wider general charity, frequently through the church. These still have their field of great usefulness to-day, but are entirely insufficient to adequately care for all such suffering. The only other method of relief that has been discovered that I have any knowledge of is through insurance methods.
>
> Successful insurance against the effect of uncertain contingencies rests on a certain fundamental fact which was disclosed only after knowledge had accumulated so that a record of the living experiences of large numbers of individual men under the conditions prevailing in civilized communities had been made, thus permitting a comparison of these experiences. When this was done it was found, although the occurrence of disasters and misfortunes was very uncertain in relation to any particular individual, that, in relation to the total population of any country of sufficient size, their occurrence was approximately constant and regular. Some of these were certain to happen to somebody, and taking considerable periods of time, approximately the same number would occur in each period. Consequently, if all persons subject to a certain contingency contribute a small sum according to the average frequency of such contingency to a fund held by a trustee and used for the purpose of reimbursing the pecuniary losses of those to whom the contingency occurs, we have a financially practicable method of securing the money needed for relieving all the victims of that kind of misfortune among the contributors to the fund.

It is on this very simple basis that the vast structure of modern insurance has been erected. Its development has been possible only through the gradual accumulation of the experience of millions of men in relation to many different kinds of calamities. The final result is that insurance against occurrences very uncertain from the standpoint of any one individual can be carried on as a business enterprise of stability and financial soundness, so that insurance has become one of the most reliable and profitable of all modern business enterprises.

We see, then, that in insurance we have an available and adequate method for relieving the widespread suffering and poverty from the economic effects of unavoidable accidents, sickness, unemployment, and other misfortunes.

* * * The mere existence of systems of insurance is not sufficient, and something more than present methods are necessary before the desired result—the complete relief of undeserved suffering—can be accomplished in the United States.

I do not think it will require any extended argument to convince this audience that the systems of accident, sickness, and life insurance now in operation are wholly inadequate and reach only a small portion of the total population of the United States. The chief reasons why these do not reach all those needing insurance are as follows:

(1) The enormous expense of conducting the business, which, added to the large amount actually required to be collected to make up the fund to indemnify the losses resulting from the contingencies insured against, makes the total cost prohibitive to the larger part of our citizens, particularly wageworkers.

(2) The lack of foresight and improvidence of many, which leads them to spend all the money they earn for the satisfaction of immediate desires and fancies. There may be other drawbacks, but these are of controlling importance in most cases. What is needed is a plan which will meet both of these difficulties. Anything less will be incomplete and unsatisfactory.

This brings me to the consideration of the desirability and feasibility of extending welfare insurance until it is universal, for the purpose of affording complete relief to all victims of unavoidable misfortune and their families.

It does not seem to me that there should be any difference of opinion among humane men concerning its desirability. Charity for this purpose is both inadequate and detrimental. Unless suffering from hunger and cold, and unless lack of all pleasures and comforts of life, are good and beneficial to the unfortunate, then the only plan which holds out any promise of preventing such wants and distress is surely desirable.

The next question is, "Is universal welfare insurance feasible—that is, practicable—in the United States?"

That the theory of welfare insurance is sound and its operation practicable is proven by the fact that it has been and is in extensive use not only in many other nations, but also in the United States. The existing systems of accident, sickness, and life insurance in the United States are all welfare insurance. Their successful operation under very unfavorable conditions proves conclusively that some welfare insurance is feasible.

But is universal welfare insurance feasible?

There is absolutely no reason why if partial use is practicable, universal use will not be also, if the cost can be reduced to the point where every person can pay the necessary premiums, and means of compulsion are available to make all those do so who are too improvident or obstinate to do so voluntarily. Those not able to work should be provided for by charitable methods, and those not willing to work when they are able to do so, which comprises the great army of able-bodied beggars, tramps, criminals, and prostitutes, should be placed and kept in farm colonies, workhouses, or penal institutions, according to their character, and there compelled to work at least enough to produce what is needed to sustain their useless existence.

This brings us to the final part of my subject—How can welfare insurance be best carried on?

I have, I believe, considered and weighed every plan and suggestion that has been made in this connection, and I am obliged to say that, so far, I have only found one plan which holds out substantial promise of accomplishing the desired purposes. This is the carrying on of a comprehensive system of compulsory welfare insurance, in all of its branches, by the National Government. While, of course, some reduction of the expense of conducting the insurance business under existing systems might be brought about by economy and efficiency, still, with the excessive acquisition and administration costs by reason of high-salaried officials and a great army of middlemen, the cost will always be exorbitant. A compulsory system of welfare insurance carried on by the National Government will not only reduce the expense of operation to a minimum so low that it will be negligible, but will render it feasible and proper for the Nation to contribute in behalf of those earning low wages a part of the dues necessary on actuarial calculations to pay for complete welfare insurance. Above all, only by a national system can the compulsion be employed necessary to force the improvident and obstinate to make provision for their families and themselves when overtaken by misfortune. The insurance of all of the workers of the United States would include such enormous numbers that an almost unvarying law of average would result which would render the business as stable and certain as agriculture. The Nation would be entirely justified in paying the expense of conducting the business and of making such contributions of a part of the premiums, should same be found necessary, in case of those receiving a low income, because of the increase of production through greater individual and industrial efficiency, and also because it would greatly diminish the necessity for charitable relief.

There would also be the same justification for the expenditure of funds raised by taxation for this purpose as for spending such funds to support the Department of Agriculture, the Fisheries Bureau, the Mining and the Geological Bureaus, and the maintenance of lighthouses and making of harbor and waterway improvements. They all contribute to the general welfare of the people of the United States, which justifies their existence.

It is admitted that the compulsory element of a welfare insurance system implies that there is a considerable proportion of the people who do not have sufficient self-control, foresight, and thrift to voluntarily take advantage of the benefits of welfare insurance, even when the plan includes contributions from employers and subsidies from the Government. This is unfortunate and discreditable but is an unalterable fact of human nature which must be taken into account in considering social plans, because in modern times even the thriftless and reckless can not be abandoned to perish by starvation and disease when unable to earn their own support. Therefore compulsion should be applied to the thriftless to force them at least to assist in making provision for the emergencies which will certainly later occur to many of them.

It is coming to be generally admitted by those most competent to judge that for any branch of welfare insurance to even approximately fulfill its purpose by furnishing protection to the classes most needing the same it must be made compulsory on all.

* * * * * * *

A general system of welfare insurance would furnish the absolutely secure institution for receiving the initial deposits and paying out, when the time came, these old-age annuities, and hence any able-bodied man who had knowledge of the extraordinary results of such a plan of providing old-age pensions and the opportunity of making such provisions by reason of the existence of a secure institution for that purpose, but nevertheless failed to do so, would have absolutely no right to complain if compulsion forced him to make such provision.

While compulsion in general is somewhat objectionable to Americans, it can not in any sense be as objectionable as the suffering which results from improvidence, and there should not be any reluctance to apply compulsion to those so reckless, ungrateful, and improvident as not to take advantage of either a reasonable amount of insurance in an expense-free Government system or too thriftless to accumulate enough property for protection against accident, sickness, old age, unemployment, and premature death.

Compulsion is now used to enforce education, sanitation, fire prevention, food supervision, traffic regulation, and, in fact, obedience to all laws. Sentimental objections to the absolutely necessary compulsory feature should not be allowed to prevent the inestimable benefits of universal welfare insurance.

That a general system of successful welfare insurance is possible only when carried on by the Nation is, I believe, conclusively proven by the fact that in all nations where it is in operation it is effected in this way. This is true of the almost complete systems now in operation in Germany and England, and also of the less complete systems of other European countries. This method has been adopted also in Australia, and in the States of Washington and Ohio in regard to workingmen's compensation.

An objection certain to be loudly and insistently urged is that a national system of welfare insurance would interfere with private business. When a private business which is for the purpose of supplying fundamental needs of the people has failed to perform its function at a reasonable cost, it then clearly becomes the duty of the Government to assume the operation of such business. Temporarily some insurance middlemen may lose employment, but no man has a vested right to make an easy living by performing an unneeded function which increases the expense of a beneficent institution. By reason of the great extension of insurance to the whole people, which would occur by creation of a compulsory national system, employment will be given to many now employed under the private system who are skilled and capable, although, of course, there would be no $25,000 to $100,000 salaries paid to agents or officials as at present. The howl about welfare insurance interfering with private business comes from extravagantly paid men who would be supplanted by Government officials at moderate salaries and stockholders who realize they could not get such enormous dividends on their investments in any other business.

A complete system of welfare insurance by bringing about, as it would, the collection of accurate and complete statistics concerning the occurrence and a study of the causes of accidents, sickness, involuntary unemployment, and other destroyers of human welfare would be an immense incentive to and aid toward preventive measures against all of these misfortunes. This has occurred in connection with accidents insured against by workmen's compensation, which is one branch of welfare insurance.

Similar preventive benefits will occur in other branches of welfare insurance. The accumulation of knowledge concerning sickness, premature death, involuntary unemployment, and similar causes of distress would certainly result in better human conservation and social upbuilding through a Nation-wide system of sickness prevention, the establishment of a complete national system of employment bureaus, and similar institutions for increasing human welfare. * * *

Welfare insurance is a plan whereby all, through the operation of the law of average, help without hardship to bear the heavy burdens from misfortune that befall the few. The community at large, however, has not grasped the conception or realized the fact that it is possible by means of a proper system of welfare insurance to distribute the financial effects of all of the misfortunes which afflict humanity in such a way that they will be easily borne by all. What is needed is education of the whole people, until each citizen realizes its benefits and practicability.

In reply to questions from the floor Mr. Potts stated his belief that the "general welfare" clause in the Constitution was adequate authorization for Congress to legislate along the lines of his paper, and that no constitutional amendment would be necessary.

A paper which emphasized the danger of State insurance, but along another line, was read by Mr. E. R. Harper, commissioner of insurance of Colorado. The title of the paper was, "How far should a life insurance company go toward conserving the lives of its policyholders." Mr. Harper said in part:

The time was when all that was expected or demanded of insurance was to meet the loss when the loss came and to have no concern for the safety or welfare of the insured in the meantime. But now comes the question, "How far should a life insurance company go toward conserving the lives of its policyholders?"

The industrial enterprise that but a few years ago gave no thought, much less expenditure of money, to the question of the welfare of its employees, to-day gives that important question virtually first thought. And what ambitious welfare programs are being carried out by so many of our commercial and industrial organizations! The highest expert ability and vast means are being utilized along humanitarian and sociological lines, a work which in the light of ideas obtaining but a few years ago, is most wonderful and at the same time most interesting.

But why all this? Is it because the influence of social welfare, pure and simple, has come to control? No; assuredly, no. Is it because of an altruistic concern for the individual worker's welfare? I regret that I can not give much credit to that worthy motive. No. By and large, it is because of the economical factor. This new method has been found to pay, and pay most handsomely; and that is the final answer. In fact, it is apparent from almost all that is written and said on the subject, that in civic and social welfare work, in the matter of disease and kindred hindrance to community interests, the questions involved are weighed more than ever with the thought of their economic quality.

The demand for service is to be greater than ever before upon every dollar of capital, upon every effort of man; and it will fall nowhere more insistently than upon life insurance, which, if it would measure up to its high calling, must take the responsibility and fully qualify. The foolish, futile days of the throwing away of values worth preserving have at last gone by, never to return; and the day of conservation is at hand—conservation of everything of value, everything worth while. And what is of more value than human life, the very subject matter of life insurance—especially when that life needlessly squandered must not only be lost to the world's upbuilding but must be paid for?

If it is essential that before insuring an applicant the life insurance company shall determine that the applicant is in good health, then why is it not just as essential—yes, far more—that after the applicant has become a policyholder he be kept in good health, that his life and productive powers be conserved as long as possible, and that the burden of his death upon the company and upon society be postponed to the utmost? It calls for no argument to show that the lower the mortality of one or all life insurance companies, the greater the returns to those interested, and consequently the lower the cost of the insurance. Then why is it not a wise economical act to expend means toward conserving life and thereby reducing mortality? When properly and efficiently applied this expenditure will prove one of the most economical factors in the life insurance business. Moreover, it will have a most salutary effect on public sentiment and tend largely to increase confidence in the business. And I know of no one thing much more needed than increased confidence upon the part of the public in insurance.

Most earnest commendation is properly given fire insurance companies for their splendid efforts toward the reduction of fire loss and the consequent conservation of property; and no one thinks of questioning their right to expend large amounts in their campaigns against fire waste. It is considered as best possible evidence of efficiency for casualty companies to secure the services of the best experts and expend freely in the work of preventing accidents.

Why do the fire and casualty companies carry out such campaigns? Not altogether for altruistic reasons, nor for social welfare reasons; but for the reason that it pays. The same reason holds good as regards life insurance even to a greater degree.

It should perhaps be said that the undertaking proposed is so ambitious and of such far-reaching consequence that it will be somewhat difficult for many companies to do the work and do it as thoroughly as it should be done. The field enlarges so rapidly and the demands are so urgent that but comparatively few companies can handle the entire plan of life conservation successfully. Consequently a way should be found whereby all companies, and thereby all policyholders, can be benefited. That can only be by a combination of all interested, in so far as this feature of life insurance work goes; that is to say, by the establishment of a general bureau, to the support and operation of which each life company shall contribute in proportion to its interest—that bureau to have complete control of the mighty work of life conservation.

Such a bureau should, of course, work in harmony with national, State, and municipal bodies of like nature. Thus assisted and properly operated, it would certainly result in a few brief years in a gratifying increase in the average length of life, with all the consequent great economical saving in the earning power of the individual, as well as in a mighty reduction in the loss ratio of life insurance with a corresponding relative saving in actual dollars required to be paid out.

Before closing, let me say that there is another feature that should be considered in connection with this important matter, and that is the tendency now manifesting itself toward State insurance—that fallacious idea of some who seem to think that if the State does the insurance business they will somehow or other get something for nothing. The National or State Governments can never do business—industrial and commercial business, such as even life insurance after all is—as efficiently and economically as can properly organized and conducted private organizations. But unless those private organizations meet what are clearly seen to be the needs and reasonable demands of the people, the State will surely take up the work, however inefficiently it may do it. Consequently if the ultimately disastrous movement toward State life insurance is to be headed off, the life insurance companies must meet the undoubted demand for greater service along the lines of conservation of life.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND ACCIDENT INSURANCE.

CONNECTICUT.

The workmen's compensation law of Connecticut divides the State into five districts, each of these being assigned to a commissioner for the determination of awards under the act. These commissioners act independently, but constitute a board for certain collective activities. The publication of a digest of the decisions of these commissioners is authorized by chapter 288, Acts of 1915, though no provision is made for a continuation of such an undertaking. Under this authority a volume of decisions[1] has been compiled, the assumption being made that further volumes will also be authorized.

Not all the decisions rendered have been published, but only such as "are deemed to be of general interest"; furthermore, paragraphs of subordinate importance have been omitted in order to economize space. Decisions of the superior court on appealed cases are also given, together with references to the Connecticut and Atlantic Reporters for such cases as were passed upon by the supreme court of errors. The fact that the awards are made by the different commissioners independently causes the decisions to "lack that uniformity incident to the work of one hand."

> The effort has been made to confine the cases selected to such as covered doubtful points, construed sections of the act the construction of which might be involved in uncertainty, or illustrated features of the law, its operation or procedure, in such a way as to be of practical assistance to those affected by the act.

Indexes show a list of cases and subjects passed upon. Naturally, in view of the novelty of the act, a very considerable number of the cases in this first volume relate to the construction of particular provisions of the act. The phrases, "arising out of employment," and

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[1] Connecticut: Compendium of Awards of the Compensation Commissioners, January, 1914, to May, 1916. 732 pp. Hartford, 1916.

"course of employment," called for discussion in a considerable number of cases. Several decisions also involved a consideration of the technical procedure as to notice of accident, questions of prejudice through want of notice, serious and willful misconduct, etc.

MASSACHUSETTS.

The Industrial Accident Board of Massachusetts has compiled in bulletin form reports of cases under the workmen's compensation act of the State determined by the supreme court.[1] These bulletins are in continuation of previous publications of the same nature, Nos. 7, 8, 10, 11, and 12 being earlier issues in this field. The decisions are reported in full with syllabi. The value of these bulletins consists in the convenient form in which they present the authoritative construction of the law of the State. Practically all the decisions contained therein are to be found in the annual publications of the United States Bureau of Labor Statistics, and in condensed form in the forthcoming Bulletin No. 203 on the subject of Workmen's Compensation.

MINNESOTA.

Bulletin No. 13 of the Department of Labor and Industries of the State of Minnesota[2] presents the construction of the workmen's compensation law of the State as developed by the various authorities to whom this work is committed by the act. Previous bulletins presenting similar material are Nos. 9 and 11 of the same office, though there has been some change in both the subject matter and the method of presentation. The present bulletin contains rulings by the attorney general and the department of labor and digests of the decisions of the district courts and of the supreme court of the State, made between August, 1915, and May, 1916. Material is for the most part presented in an abridged and compact form and is arranged under topical headings, 12 in number. Court decisions, where they have been rendered on the subject, are presented first, followed by opinions of the attorney general and of the labor department. An alphabetical topical index is announced as being a part of the bulletin, as is a cumulative index, presenting all opinions and decisions up to June 10, 1916; these features, however, are not found in the copy of the bulletin at hand.

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[1] Massachusetts: Industrial Accident Board. Bulletins Nos. 15, 16. Report of Cases Under the Workmen's Compensation Act Determined on Appeal to the Supreme Judicial Court. May 20, 1915, to Dec. 1, 1915, 19 pp. Dec. 1, 1915, to Mar. 7, 1916, 76 pp. Boston, 1915, 1916.

[2] Minnesota: Department of Labor and Industries. Court Decisions, Attorney General's Opinions, Department of Labor Opinions, Relative to the Workmen's Compensation Act. 57 pp. St. Paul, 1916.

WISCONSIN.[1]

A bulletin of the Industrial Commission of Wisconsin, issued August 1, 1916, contains information, for the year 1915,[2] relative to the business and accident experience of every insurance company and the accident and compensation experience of every employer carrying his own risk, under the workmen's compensation act. It shows the net premiums collected, the earned premiums,[3] and all expenditures incurred, the expense of doing business as well as the actual amount of compensation paid to injured workmen and their dependents.

The following facts appear from the report:

> During 1915 the insurance companies collected $1,651,000[4] in workmen's compensation premiums in this State, a decrease of 10 per cent as compared with the amount collected in 1914.
>
> Of the total business in this State, about 25 per cent was carried by the six Wisconsin mutual companies. * * * During 1914 only 20 per cent of the entire business was placed with Wisconsin mutuals. The increase in 1915 seems to indicate that more employers are availing themselves of the lower cost of mutual insurance.
>
> The total cost of indemnifying injured workmen and their dependents, including medical benefits, during 1915, was $954,412 or 58 per cent of the earned premiums. Of this amount 65 per cent was paid and 37 per cent was outstanding at the end of the year.

The report emphasizes the low cost of insurance in Wisconsin mutuals as compared with stock companies and interinsurers, the management expense in the first instance being only 20.7 per cent of the earned premiums, while stock companies and interinsurers each used approximately 40 per cent for this purpose.

> For every 100 cents of compensation received by the injured, insurance carriers used 61 cents for expenses. It appears that in this form of insurance, which is practically compulsory and for the benefit of a third party, the overhead cost is too high. The test of a good compensation law is that it actually carries to injured workmen the maximum proportion of the cost of compensation for industries, and that payments are prompt and certain. Since insurance is the machinery by which the large proportion of compensation is paid, the amount which the workmen receive in proportion to the amount paid by employers is a fair test of the economy of the system. In 1915, taking all companies together, every 100 cents paid by employers to insurance carriers was used as follows: Returned to injured workmen, 58 cents; expenses of insurance management, 35 cents;[5] surplus to insurance companies, 7 cents. Stock companies returned 56 cents of each dollar to beneficiaries, used 40 cents[5] for

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[1] Industrial Commission. Workmen's Compensation Insurance. Bulletin, issued Aug. 1, 1916. [Madison, 1916.] 32 pp.

[2] For an account of the 1914 experience see the MONTHLY REVIEW for January, 1916, p. 53.

[3] By earned premiums is meant the actual premiums earned during the year. Policies are issued for one year and the premiums are paid in advance. Hence, on a policy issued July 1, one-half of the premium will be earned on Dec. 31, of the same year.

[4] This does not agree with the amount given in the tables on pages 82 and 83.

[5] Approximately. For exact figure see table on p. 84.

expenses, and 4 cents went as surplus to stockholders. Wisconsin mutuals returned 60 cents to injured workmen, used 21 cents[1] for expenses, and 19 cents remained as surplus to the policyholders. It is gratifying to note that Wisconsin mutuals are continuing to operate on a very economical basis. * * *

The greatest saving in the management of Wisconsin mutuals was made in the acquisition cost. Stock companies spent 16 per cent[1] of premiums for agents' commissions alone, while the total selling cost of the mutuals was 4 per cent[1] of premiums. A considerable saving was also effected in the adjustment of claims, for which item the stock companies spent 8 per cent[1] of premiums as compared with 2 per cent[1] spent by Wisconsin mutuals.

The following is a condensed statement of the business of insurance companies in the State in 1915. It shows the actual compensation incurred during the year but does not include payments made for accidents occurring prior to 1915. "Expenses incurred" means expenses upon the business represented by the actual earned premiums.

STATEMENT OF INSURANCE COMPANIES UNDER THE WISCONSIN WORKMEN'S COMPENSATION INSURANCE ACT, 1915.

Insurance companies.	Net premium.	Earned premium.	Compensation and expenses incurred.								Per cent of earned premiums.
			Compensation.				Expenses.			Total.	
			Indemnity.[1]	Medical benefits.[1]	Total.	Per cent of earned premiums.	Amount.	Per cent of earned premiums.[2]	Per $1 of compensation.[2]		
Wisconsin mutuals...	$413,695	$406,959	$156,584	$86,866	$243,450	60	$84,053	21	$0.35	$327,503	81
Interinsurers and foreign mutuals...	118,768	88,877	42,763	17,142	59,905	68	35,564	40	.60	95,469	108
Stock companies.....	1,076,514	1,156,909	444,129	206,928	651,057	56	463,973	40	.71	1,115,030	96
Total..	1,608,977	[3]1,652,745	643,476	310,936	[3]954,412	58	583,590	35	.61	1,538,002	93

[1] Includes both the amount paid and that outstanding.

[2] The figures in this column do not agree with those in the table on page 84 for the reason given in Note 1 to that table.

[3] These totals do not necessarily agree with those in the table on page 83 since this table is compiled from reports filed with the commission, while the other table includes only audited policies.

A feature of the report is a statement of the reduction in compensation insurance rates which has been made since the enactment of the workmen's compensation act in 1911. In September of that year, when the first manual of rates was filed with the industrial commission, the average rate for unlimited[2] coverage on 100 representative industry classes was $4.75 per hundred dollars of pay roll, while the present average (June 1, 1916) as given in the report is $2.36, a reduction of over 50 per cent. In February, 1913, the average rate was $3.80; in October, 1913, it was $3.54; in September, 1914, it was $2.72. It is explained that this reduction is still greater when merit rating[1] is taken into account.

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[1] Approximately. For exact figure see table on p. 84.

[2] "Unlimited" means full coverage. Some policies specify a limit of liability for one person and one accident. The standard limits are $5,000 for one person and $10,000 for one accident resulting in injury to several persons.

> No such system was in use in 1911, but since the latter part of 1915 the base rates have been reduced about 15 per cent by giving credit for safeguarding and conditions in general which promote safety. Hence, the reduction in reality was from $4.75 to about $2, or 58 per cent. * * * Applying the new bureau rates to the pay rolls of policies issued in 1914, the resulting weighted average rate is $161. The average pure premium on $100,725,000[2] pay roll was $0.87. Merit rating will reduce the average rate to about $1.45. This leaves a margin of $0.58, or 40 per cent of net premiums for management expenses and profit.

The following table gives the pure premium experience on workmen's compensation insurance policies of 1914 issue for each specified group of industries. In this table the pure premium represents the actual cost of compensation per $100 of pay roll, and the bureau base rate is that established by the Workmen's Compensation Service Bureau.

PURE PREMIUM EXPERIENCE ON WORKMEN'S COMPENSATION INSURANCE POLICIES OF 1914 ISSUE, BY SPECIFIED INDUSTRY CLASSES.

Industry class.	Audited pay roll.	Earned premium.	Compensation incurred.	Number of compensable accidents.	Premium rate collected.	Pure premium.	Bureau base rate.
Mining and quarrying	$798,685	$45,334	$27,202	146	$5.68	$3.41	$4.54
Chemical manufacturing	548,958	7,367	3,427	39	1.35	.62	1.41
Earth and stone working	1,426,782	24,094	18,459	151	1.68	1.29	1.73
Food and beverages	8,436,317	115,512	60,184	577	1.37	.71	1.56
Leather working	4,073,595	26,902	15,145	120	.66	.37	.81
Metal working	11,444,581	146,194	85,175	891	1.28	.75	1.60
Pulp and paper manufacturing	4,357,659	78,054	66,238	682	1.79	1.52	2.38
Textile manufacturing	4,122,719	17,775	11,050	98	.43	.27	.49
Vehicle manufacturing	2,304,831	23,742	20,385	205	1.03	.89	1.01
Miscellaneous manufacturing	4,209,344	31,884	11,577	147	....	....	......
Woodworking industries	13,294,012	332,888	200,398	2,143	2.51	1.50	3.16
Construction	9,605,986	303,933	155,623	1,117	3.16	1.62	3.74
Public utilities	1,073,422	37,288	14,390	86	3.47	1.34	2.80
Transportation	5,887,267	137,910	86,014	654	2.34	1.46	2.58
Trade	11,711,098	97,435	66,839	675	.83	.57	.77
Miscellaneous industries:							
Clerical office force	10,320,472	17,443	1,669	27	.17	.016	.09
Farming	799,540	14,518	7,497	78	1.89	.94	1.52
Hotels	1,014,893	7,229	3,687	60	.72	.36	.60
Ice harvesting	124,078	5,532	4,792	56	4.45	3.87	4.80
Salesmen, outside	2,026,519	4,466	1,138	17	.22	.06	.14
Total	[a] 100,757,224	[a] 1,510,152	[a] 872,198	[a] 8,082	1.51	.87	1.61

[a] Includes figures for minor industry classes not shown separately.

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[1] The function of merit rating is to recognize the differences in hazard in establishments in the same industry class. Instead of having one flat rate for an entire industry the rate is adjusted according to the hazards of individual establishments, and a regular schedule of credits and charges is applied for conditions which tend to prevent or produce accidents. The owner of a well-guarded plant receives a reduction in rate, while the careless employer is penalized.

[2] This does not agree with the total pay roll as given in the table following; the discrepancy is not explained in the report.

During 1915 stock companies as a whole used 40 per cent of earned premiums for overhead cost. From this it appears that the present bureau rates, after allowing 10 per cent for reduction under merit rating, can not be materially reduced unless the management expenses are decreased. Some nonbureau stock companies write at rates considerably below the bureau base rates, but do not apply merit rating, yet this does not warrant a reduction of more than about 15 per cent, and any reduction beyond this point should be the result of a saving in management expenses. Due to a low expense ratio—21 per cent of earned premiums—the Wisconsin mutuals are able to write at rates considerably below the stock companies and still collect sufficient premiums to meet all losses.

The following table, adapted from the report, shows the division of the expenses incurred by insurance companies. It will be seen that Wisconsin mutuals occupy a favorable position as compared with other insurance companies operating under the workmen's compensation insurance act.

EXPENSES INCURRED BY INSURANCE COMPANIES UNDER THE WISCONSIN WORKMEN'S COMPENSATION ACT, 1915.

Expenditure for—	Wisconsin mutuals.			Interinsurers.		
	Amount.	Per cent of earned premiums.[1]	Per $1 of compensation.[1]	Amount.	Per cent of earned premiums.[1]	Per $1 of compensation.[1]
Inspection	$10,444	2.6	$0.043	$601	0.7	$0.010
Adjustment	6,536	1.7	.027	8,806	9.9	.147
Acquisition	17,259	4.2	.071			
Taxes				1,754	2.0	.029
Home office	49,814	12.2	.205	24,403	27.5	.407
Total	84,053	20.7	.345	35,564	40.1	.594

Expenditure for—	Stock companies.			All companies.		
	Amount.	Per cent of earned premiums.[1]	Per $1 of compensation.[1]	Amount.	Per cent of earned premiums.[1]	Per $1 of compensation.[1]
Inspection	$36,381	3.1	$0.056	$47,426	2.9	$0.050
Adjustment	86,147	7.4	.132	101,489	6.1	.106
Acquisition	182,030	15.7	.280	199,289	12.1	.209
Taxes	23,444	2.0	.036	25,198	1.5	.026
Home office	135,971	11.8	.209	210,188	12.7	.220
Total	463,973	39.9	.712	583,590	35.3	.611

[1] This column is not taken from the report, but is computed from data contained in this and other tables in the report. The figures do not agree in some instances with those mentioned in the text or in the table on page 82, and this is due to the fact that those figures are taken from the report and decimals have been dropped.

The report notes a tendency among insurance companies to underestimate their outstanding liabilities on compensation claims, which results in the carrying of insufficient reserves. If unpaid losses are underestimated the result is an error in the pure premium on industry classes as well as in the loss ratio[1] of insurance companies. In comparing the amount paid in 1915 for accidents occurring in 1914 and the estimated liability still outstanding with the estimates made at the end of 1914, it is found that the unpaid losses were considerably underestimated. For instance, the report shows that instead of $313,539 the estimate should have been $450,885, an increase of $137,346, or 44 per cent of the original amount. Thus the total 1914 losses were increased by 14 per cent and the loss ratio was increased from 51 per cent to 58 per cent of earned premiums.

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[1] By loss ratio is meant the per cent the compensation incurred is to earned premiums.

During 1915, according to the report, about 550 employers carried their own risk, the total number at any one time not exceeding 500. The total pay roll expended by these concerns was $55,690,200, and the total compensation incurred was $280,502, of which amount 39 per cent was for medical aid. The cost per $100 of pay roll averaged 51 cents as compared to 87 cents, the experience on audited policies. (See table on page 83.)

The report explains this reduced cost to employers who carry their own risk by stating that the large part of the pay roll is represented by a small number of large employers who have done a great deal of safety work and have reduced accidents to the minimum, and that when workmen are injured these employers often find lighter employment for the injured and pay them full wages before they are able to work at their regular occupation, which not only enables a workman to earn full wages but is cheaper to the employer than to pay compensation. An insured employer, it is stated, has no such inducement and usually does not take the injured employee back to work until he is able to do his regular work.

The commission offers the following suggestion on how to reduce insurance cost:

> Premiums collected by insurance carriers must be sufficient to meet all compensation incurred and to pay for the cost of management. Rates are based on actual experience on all classes which present a large enough exposure. To the actual experience is added a loading for management expenses. To reduce rates, either the losses or expenses, or both, must be decreased. To reduce the compensation cost, by the prevention of accidents, remains for the employer. Safety appliances and safety organizations not only effect a reduction from the base rate but tend to a reduction of losses and, ultimately, a decreased base rate. To prevent accidents means to reduce your insurance cost.

SYNTHESIS OF RATES FOR WORKMEN'S COMPENSATION.[1]

In this pamphlet the author considers some of the important factors entering into the calculation of compensation rates, which "are the focal points of everything that enters into their calculation" and "should be the focal points of everything that ought to enter into their calculation." Just as it is important for a business man to take everything pertaining to cost into account before quoting his price, so it is essential that in the calculation of compensation rates every influence bearing upon the determination of such rates be given consideration.

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[1] The Synthesis of Rates for Workmen's Compensation, by Claude E. Scattergood. The Fidelity and Casualty Company of New York, 92 to 94 Liberty Street, New York, February, 1916. 31 pp.

The author notes that the first thing to obtain is the pure premium, which "is the amount that will be given to injured workmen or their dependents by reason of accidents occurring during the period which the pay roll covers, for each $100 of pay roll expended during that period," and is determined by dividing the total losses by the amount of pay roll which represents the exposure.

In order to secure as dependable a pure premium as possible the Workmen's Compensation Service Bureau receives from insurance companies reports of their experience, both as to pay rolls and losses, by lines of business. By combining this information the bureau obtains a large pay roll exposure and loss experience from which, by dividing the second by the first, it derives an average pure premium for all lines of business combined, which becomes the basis upon which manuals of compensation rates are compiled. In fixing the pure premium the following considerations are deemed essential in order to avoid increasing rates which are found by experience to be too low, and to assure the security of insurance carriers as well as the security of compensation to injured workmen and their dependents. In these factors the author traces the formation of a manual of compensation rates for a western State based upon the experience of an eastern State.

1. Since a beneficiary may become entitled to a series of payments occurring at regular intervals, together with the cost of his medical and surgical attendance, for the period and limitations allowed by the compensation law, it is essential that the pure premium should cover not only the losses actually paid, but also the estimate of outstanding losses, which, it is admitted, is difficult to determine and consequently almost certain to be placed too low unless a loading factor be added. "If the underestimate is considered to be 10 per cent of the total losses incurred for all lines of industry combined, the pure premium for each industry must be increased by 10 per cent."

2. Another factor to be considered is the law differential; that is, the effect upon the proposed rate of the provisions of the compensation law of the State in which the rate is to be applied. Thus the pure premium, corrected for underestimate of outstanding losses, must be increased or decreased by a percentage of the difference

between the cost of accidents in the State taken as a basis and the State in which the rate is to be applied, as expressed in terms of weeks' wages.

3. The rate must also reflect the accident frequency or the rate at which accidents occur among employees exposed to injury. This is obtained by dividing the accidents by the number of employees, and since the conditions under which men work in various States or in various industries in the State influence the accident frequency rate, it is important that a loading for this factor be included.

4. The increasing cost of the compensation act, arising out of the fact that as workmen learn of and become educated to its benefits they will make more claims upon it, is to be considered in fixing the rate.

5. The loading for profit, if there be such, must not be disregarded.

6. To the pure premium also must be added a loading for expenses, including business getting, service, administration, and taxes. This percentage will be higher in States whose law gives low loss cost than where high loss costs are incurred.

7. Experience has apparently demonstrated that schedule rating tends to reduce premiums, both when the adjustment in rate was made from inspection of plants and also when experience under former liability policies was the basis. Some loading, it is believed, should be placed upon the pure premium to counteract the effect of these reductions.

8. Where compensation laws cover industrial diseases this fact must be taken into consideration in establishing the rate.

9. Finally, there must be a loading for catastrophe cost which, expressed in cents per $100 of pay roll, is not attached to the pure premium but is added to the rate itself as finally established.

It is explained that when rates for a certain State can be calculated upon the basis of pay roll and loss experience of the State itself, loadings for law cost and accident frequency will not be necessary.

ACCIDENT EXPERIENCE OF THE PORTLAND CEMENT ASSOCIATION IN 1915.[1]

The Study of Accidents for the Year 1915 is a record of the accident experience of the Portland Cement Assciation and is the third such study to be presented to the member companies. Owing to the difficulty of collecting accurate figures of the number of employees in the various companies for different periods of time the accident rates are for the most part on the basis of a million barrels of cement produced. In the studies of the two previous years, it is stated, no charge of days lost was made for fatal accidents, so that the most severe accidents failed to have any weight in the distribution of time loss. "While accident frequency is illuminating, accident severity, which is shown by the days lost chargeable to them, is of greater importance, and for this reason" the bureau of accident prevention of the association, in the 1915 report, has adopted the plan in use by the United States Bureau of Labor Statistics of making a charge of 9,000 days for each fatal accident.

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[1] The Study of Accidents for the Year 1915, prepared and copyrighted by the bureau of accident prevention of the Portland Cement Association, Chicago, September, 1916. 8 charts; 3 inserts; 31 pp.

> The most gratifying and outstanding feature presented by this study is the fact that there were but 35 fatalities reported during 1915, as against 59 in 1914. Figuring upon the million barrels produced basis, this is a reduction of 50 per cent in fatal accidents. From this it is evident that results are being accomplished in the saving of human life and limb and the prevention of pain, suffering, and misery on the part of injured workmen and their dependents.

It appears from the report that in 1913 there were 3,335 accidents, causing a loss of 393,986 days; in 1914, 3,786 accidents, causing a loss of 558,982 days; in 1915, 3,967 accidents, causing a loss of 345,171 days. The following table gives a summary comparison of accidents for the three years, showing the total accidents and also the number per million barrels of cement produced:

NUMBER OF ACCIDENTS AND OF DAYS LOST COMPARED WITH PRODUCTION OF CEMENT, BY CLASSIFIED NUMBER OF DAYS LOST, 1913, 1914, AND 1915.

[The approximate production was as follows: 1913, 52,500,000 barrels; 1914, 50,600,000 barrels; 1915, 61,200,000 barrels.]

Days lost.	Total number of accidents.			Number of accidents per 1,000,000 barrels of cement produced.			Total number of days lost.			Days lost per 1,000,000 barrels of cement produced.		
	1913	1914	1915	1913	1914	1915	1913	1914	1915	1913	1914	1915
No time lost	1,138	1,474	1,684	21.7	29.1	27.5	......	......	......	......	......	......
Less than 1 day	41	47	45	.8	.9	.7	......	......	......	......	......	......
1 to 7 days	905	1,083	1,073	17.2	21.4	17.6	3,415	4,017	3,848	65.1	79.4	62.9
8 to 10 days	206	261	239	3.9	5.2	3.9	1,849	2,348	2,131	35.2	46.4	34.8
11 to 14 days	217	219	227	4.1	4.3	3.7	2,704	2,714	2,818	51.5	53.6	46.0
Total, less than 15 days.	2,507	3,084	3,268	47.7	60.9	53.4	7,968	9,079	8,797	151.8	179.4	143.7
15 to 25 days	232	291	275	4.4	5.8	4.5	4,483	6,474	5,272	85.4	128.0	86.1
26 to 40 days	117	139	165	2.2	2.7	2.7	3,918	4,406	5,225	74.6	87.1	85.4
41 to 55 days	45	57	56	.9	1.1	.9	2,390	2,642	2,680	45.5	52.2	43.9
56 to 70 days	21	29	23	.4	.6	.4	1,413	1,824	1,374	26.9	36.1	22.5
71 to 85 days	23	13	17	.4	.3	.3	1,546	982	1,301	29.4	19.4	21.3
86 to 99 days	13	11	12	.3	.2	.2	1,284	987	1,213	24.5	19.5	19.8
100 days and over	14	12	28	.3	.2	.4	1,984	1,586	4,300	37.8	31.3	70.3
Death	41	59	35	.8	1.2	.6	369,000	531,000	315,000	7,028.6	10,494.0	5,147.0
Total, 15 days and over.	506	611	611	9.7	12.1	10.0	386,018	549,903	336,374	7,352.7	10,867.6	5,496.3
Did not return to work	139	86	60	2.6	1.7	1.0	......	......	......	......	......	......
Not given	183	5	28	3.5	.1	.4	......	......	......	......	......	......
Grand total	3,335	3,786	3,967	63.5	74.8	64.8	393,986	558,982	345,171	7,504.5	11,047.0	5,640.0

Under the totals for less than 15 days a considerable drop is shown by 1915 as compared with 1914 in both the number of accidents per million barrels produced and the days lost per million barrels produced. The first division in this table comprises those accidents which, in a majority of the States, would be noncompensable on account of the generally prescribed waiting period of 2 weeks, which is found in the greater number of State compensation laws now effective. In the second division of the table, comprising accidents on which 15 to 25 days and up were lost, the fatality charge of 9,000 days plays an important part.

Referring to the columns based on per million barrels produced, a reduction of practically 50 per cent is shown for 1915 as compared with 1914 on the days lost on accidents causing a disability of more than 14 days, and a reduction of practically 18 per cent in the number of such accidents per million barrels produced.

The following table shows for 1915 the number of accidents, the per cent of total accidents, the per cent of total employees, and the per cent of total number of days lost for each specified department:

NUMBER AND PER CENT OF ACCIDENTS, BY DEPARTMENTS, AND PER CENT OF TOTAL EMPLOYEES, AND OF TOTAL DAYS LOST IN EACH DEPARTMENT, 1915.

Department.	Accidents reported.	Per cent of total number of accidents reported.	Per cent of total number of employees.[1]	Per cent of total number of days lost.
Quarry	982	24.80	21.24	26.02
Clayfield	47	1.19	1.91	.18
Crushing	302	7.60	3.01	8.49
Raw	328	8.28	8.07	8.57
Burning	346	8.74	5.64	11.12
Clinker grinding	318	8.03	6.94	3.50
Coal grinding	122	3.08	2.94	13.44
Cement storage	81	2.05	.84	.18
Stone storage	14	.36	.87	5.24
Packing and shipping	274	6.92	12.66	3.21
Power house	243	6.14	7.74	3.01
Machine shop	342	8.64	4.42	2.93
Carpenter shop	11	.28	1.71	.01
Blacksmith shop	35	.88	.97	.02
Storeroom	44	1.11	.99	.05
Railroad	73	1.85	1.69	8.10
Yard	281	7.10	8.26	3.12
Offices	3	.15	4.21	....
Other departments	108	2.80	5.89	2.81
Total	[2] 3,954	100.00	100.00	100.00

[1] Although based upon the total number of employees, the report does not show the number employed in each department or the total number of employees.

[2] This does not include 6 accidents occurring outside of plant and 7 accidents not charged to any one department.

From the above table it would appear that in such departments as coal grinding and railroad the accident frequency is comparatively low, while the accident severity is high. On the other hand, departments showing a high per cent of accidents as compared with per cent of employees and per cent of days lost, as, for instance, machine shop and clinker grinding, have a greater per cent of minor injuries occurring in them.

It is shown that during 1915 the commonest causes of accidents were falling objects, sharp edges or points, flying material, and breaking or slipping of machines, parts or objects; 20.8 per cent were due to the first-named, 14.7 per cent to the second, 13.6 per cent to the third, and 10.7 per cent to the fourth cause.

Accidents classified by nature of injury and by days lost show 65.8 per cent due to minor cuts, bruises, burns, or sprains, with an average of 3.3 days lost; 15.4 per cent due to severe cuts, bruises, burns, or sprains, with an average of 18.2 days lost; 11 per cent to eye injuries (temporary), with an average of 3.6 days lost; and 4.1 per cent to breaks or fractures, with an average of 37.9 days lost. Amputations were responsible for an average of 52.3 days lost and sickness and infection for an average loss of 10.5 days. It was found that the greatest number of accidents occurred after more than 4 but less than 5 hours of work; that more accidents (16.2 per cent) happened on Wednesday than on any other day; that in the morning the greatest number occurred between the hours of 9 and 10 o'clock, and in the afternoon, between 2 and 3 o'clock; that 792 accidents (20 per cent) affected men who had been employed 4 weeks or less, which "clearly indicates the importance of the proper education of new employees before allowing them to take up their duties"; that of 18,554 employees, the highest accident frequency (58.3 accidents per 100 employees) and the highest accident severity (57.7 days lost per employee) appeared among those of German birth, while the Portuguese showed the highest fatality rate (0.9 per 100 employees). It also appears from the report that the age group in which the greatest number of accidents occurred was 30 to 39 years, inclusive, with an average of 45 days lost; that 2,417 (60.9 per cent) of the accidents occurred to those who spoke good English, while the highest average days lost was among those not speaking English; that married men suffered 68 per cent of the accidents and were charged with 63 per cent of the total time lost; that of 2,610 minor injuries, only 80 are reported as having received no medical treatment at all, while 1,179 received first aid and 938 received both first aid and a doctor's services; that of the 35 fatal cases, 4 are reported as having received no medical attention, since death was instantaneous.

The report closes with an estimate of the cost of accidents for the year 1915, based upon the following specifications, "which were determined by arriving at an average value for the various clauses of compensation laws in effect":

General.—Injured men to be compensated for all injuries, irrespective of responsibility, unless willfully inflicted or the result of intoxication.

Waiting period.—Compensation starting on the fifteenth day after injured leaves work.

Scale of compensation.—Partial disability: 50 per cent of loss of earning power; maximum period, 300 weeks; maximum amount, $3,000; maximum per week, $10.

Total disability: 50 per cent of average weekly wages; maximum $10, minimum $5, weekly, or full wages if less than $5 weekly; maximum period, 400 weeks; maximum amount to be paid, $4,000.

Death: If no dependents, reasonable expenses of last sickness and burial, not to exceed $100; total dependents, 50 per cent of average weekly wages for a period not exceeding 300 weeks from date of injury; maximum, $10 per week; to partial dependents, such percentage of above as amount contributed by deceased to such partial dependent bore to total wages of deceased.

Medical and surgical aid.—Employers must furnish reasonable medical and surgical aid and pay hospital expenses as required at time of injury and for as much as 40 days following date of injury. Total amount not to exceed $150.

Average wages—How computed.—Average weekly wages to be one fifty-second of average yearly earnings; yearly earnings to be 300 times the average daily wage.

Who are dependents.—Dependents limited to members of family of deceased as spouse, lineal descendants, ancestors, brothers, or sisters.

Using the above as a basis, the approximate compensation cost of fatalities and other accidents involving more than 14 days lost is estimated to be as follows:

ESTIMATED COST OF FATAL AND NONFATAL ACCIDENTS FOR THE YEAR 1915.

Item.	Number.	Number of days.	Compensation.
Fatalities	35	315,000	$39,894
Injuries of more than 14 days' duration	[1] 664	21,374	9,814
Other costs involved:			
Days lost at $1 each		30,171	30,171
Medical attention, at $1.50 per day		25,000	37,500
Hospital treatment, at $2.50 per day		2,800	7,000
Loss of output—cost of hiring men			25,000
Reporting 3,967 accidents, at $3			11,901
Total			161,280

[1] The number shown in the table on p. 88 is 611; it is possible that 53 were carried over from the previous year.

Accidents in 1914, according to the estimate appearing in the Study of Accidents for that year, cost the association's members $181,413. From the total estimate of $161,280 for 1915, the appreciable decrease in the cost of accidents as compared with last year is noticeable. Reducing these two totals to a per million barrels produced basis, accidents in 1915 cost $2,635 per million barrels [2.6 mills per barrel] produced as against a cost of $3,585 per million barrels [3.6 mills per barrel] produced in 1914. This shows a reduction of almost 26 per cent in the cost of accidents for 1915 as compared with the previous year. Surely this is ground for encouragement.

BLACK DAMP IN MINES.[1]

The United States Bureau of Mines has recently issued a bulletin entitled "Black Damp in Mines," which gives the results of an examination of samples of air in many different coal mines in the country, showing how atmospheric air after entering a coal mine loses oxygen and gains carbon dioxide with resulting formation of the so-called black damp. The report also discusses the effects of the constituents of the black damp on men, on the burning of oil and acetylene lamps, and on the explosibility of methane. The term "black damp" has been widely used to designate accumulations of carbon dioxide, but it is pointed out that a more exact definition characterizes it as an accumulation of carbon dioxide and nitrogen in proportions larger than those found in atmospheric air. Pure dry air, it is stated, contains 20.93 per cent of oxygen, 0.03 per cent of carbon dioxide, and 79.04 per cent of nitrogen. When it enters a coal mine it changes in composition according to (1) the velocity with which it traverses the workings; (2) the amount of coal with which it comes in contact—that is, the extent of the mine workings that it traverses; (3) the gaseous nature of the seam; (4) the tendency of the coal to absorb oxygen; and (5) the temperature and wetness of the mine.

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[1] Black Damp in Mines, by G. A. Burrell, I. W. Robertson, and G. G. Oberfell. United States Bureau of Mines Bullettin 105, Washington, 1916. 88 pp.

The report indicates that miners are not only affected by an increase in the amount of carbon dioxide but also by a diminution in the amount of oxygen. It was found that a man may work for a long time in an atmosphere containing from 3 to 4 per cent of carbon dioxide, although his efficiency as a workman will be greatly affected and he will become quickly fatigued. "The presence in the air of as little as 1 or 2 per cent of carbon dioxide is not so much a matter of safety and comfort to those who breathe it as it is of their efficiency as workmen." The presence of carbon dioxide in proportion as high as 0.2 per cent is usually a sign of stagnant air and poor ventilation. With 12 to 15 per cent the patient soon becomes unconscious, and death may take place after exposure for several hours to 25 per cent. As to the effect of a diminution of the oxygen supply the report states that distress is caused in some people when the oxygen content falls to less than 13 per cent (normally about 21 per cent). "The important point to remember is that rapid breathing caused by carbon dioxide starts long before there is any serious danger, whereas rapid breathing caused by a deficiency of oxygen is a grave symptom and points urgently to serious danger." In an experiment conducted by the authors a man lost consciousness temporarily when the oxygen content of an atmosphere he breathed fell to 7 per cent.

It is explained that the difference between ventilation conditions in buildings above ground and in coal mines is in the degree of vitiation of the air as regards low oxygen and high carbon dioxide; above ground relatively small oxygen and carbon dioxide changes—a few tenths of 1 per cent—usually represent bad air; below ground these small percentages are insignificant. For instance, it is stated that in coal mines carbon dioxide arises principally from the action of the air on the coal, and 0.2 to 0.3 per cent is frequently found in the cool, swiftly moving air of returns, where 50,000 or more cubic feet of air is passing per minute and the wet-bulb or dry-bulb temperature does not exceed 65° F. Likewise the oxygen content is said to be scarcely ever normal in a coal mine, owing to the absorption of oxygen by the coal, a diminution of 1 per cent being not uncommon.

The authors believe that the oxygen content in coal mines should not fall below 19 per cent. The maximum percentage of carbon dioxide allowed in England is 1.25. The principal cause of depletion of oxygen in coal-mine air and the increase of carbon dioxide is said to be the reaction between coal and the oxygen of the air, some of the oxygen actually being held dissolved in the coal substance. "Part of the oxygen is converted into water, part into carbon dioxide, and part (by far the larger part) is retained as combined oxygen to give compounds richer in oxygen than the coal itself. Part of the carbon dioxide is retained by the coal."

The report notes the fact that explosive proportions of methane in air become nonexplosive when the proportion of oxygen in the atmosphere falls below about 14 per cent, and that carbon dioxide has only a slightly greater effect in reducing the explosibility of methane-air mixtures than nitrogen has. Thus when the oxygen is kept constant at 20 per cent part of the nitrogen must be replaced by 10 per cent of carbon dioxide to raise the low limit for methane from 5.8 to 6.2 per cent.

The specific gravity of black damp appears to vary considerably in certain mixtures, and if methane is present the combined gases may be lighter than air. For this reason great caution would appear to be necessary in the presence of black damp of lighter density than air.

The effects of carbon dioxide and oxygen on men and lights are discussed and experiments are cited leading to the following conclusions:

> An oil-fed flame becomes extinguished when the oxygen in air falls to about 17 per cent; an acetylene flame is extinguished when the oxygen falls to about 12 or 13 per cent.
>
> Lack of oxygen is the important factor in extinguishing lights. In some experiments conducted by the authors the oxygen content fell to 16.3 per cent before the flame became extinguished, but the presence of 10 per cent of carbon dioxide raised the extinguishing percentage of oxygen to 17.3.
>
> Atmospheres that do not contain enough oxygen to support an oil-fed flame (about 17 per cent) may be explosive when the oxygen content is as low as 14 per cent, if enough methane is present.

When a burning part of a mine has been successfully sealed the composition of the atmosphere within changes. The oxygen decreases to a proportion (probably about 17 per cent) that will not support flame; ultimately the oxygen content becomes so small that the rate of combustion is extremely low, so low that combustion entirely ceases, the embers cool, and the admission of air when the mine is reopened does not rekindle them.

In 111 samples of gas from 29 mines represented the average percentage of carbon dioxide in the black damp was 11.5 per cent and the average percentage of nitrogen 89.5 per cent.

In 6 mines of 22 examined the temperature was higher than it should be (75° F., wet bulb) under the best ventilating conditions.

Analyses of a large number of samples show how mine air changes as it traverses the workings. The average composition of the black damp was 9.2 per cent carbon dioxide and 90.8 per cent nitrogen. Except for two or three samples, in which carbon dioxide was high and the oxygen low, the quality of the air was good.

As regards the unfavorable effect of black damp on men, on lights, and on the explosibility of methane-air mixtures, the diminution of oxygen in the atmosphere, resulting in the formation of more nitrogen, is mainly responsible. The presence of carbon dioxide is far less important; hence the objection to making the terms "black damp" and "carbon dioxide" synonymous.

The investigation seemed to show that many of the mines of the Cripple Creek region are menaced with gas that is loosely held in the rock strata and that issues at times into the mines, so that workmen can not enter certain drifts and occasionally a whole mine. The gas was found to contain about 14 per cent carbon dioxide and 86 per cent nitrogen. Data regarding ventilation conditions in 15 metal mines are shown, indicating an average of 2.67 per cent of black damp, composed of 9.3 per cent carbon dioxide and 90.7 per cent nitrogen, or about the same as that found in coal mines.

SAFE PRACTICE AT BLAST FURNACES.

Technical Paper 136,[1] issued in August by the United States Bureau of Mines, describes the dangers of the different kinds of work about blast furnaces, points out how the risk of accident may be lessened or avoided, and contains suggestions to foremen, master mechanics, and other officials on the methods of organizing and conducting safety work. There are 44 illustrations showing safe and unsafe practices. The suggestions are presented under five general heads: Accident prevention, How to attack the accident problem, Responsibility of the foreman, Precautions to be observed at blast-furnace plants, and Notes on first aid.

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[1] Safe Practice at Blast Furnaces; a manual for foremen and men, by Frederick H. Willcox. United States Bureau of Mines, Technical Paper 136. Washington, 1916. 73 pp. 44 illustrations.

In the matter of accident prevention it is pointed out that the management should take the leading part, either by employing experts or by having the department heads make a special study of safety conditions; that it should supply the funds for making necessary changes in plant equipment; that such interest on the part of the management inspires interest in the rest of the force and makes it easier for the foremen to organize the workers and train themselves for the best results in accident reduction. Supplementing the responsibility of the management and of the foremen is the responsibility which rests upon the safety inspectors of the plant, who "are invaluable for looking after recommendations, investigating accidents, pointing out possible improvements in equipment and methods, and organizing safety work," but whose suggestions "can no more eliminate accidents than suggestions can eliminate off-grade iron, unless his recommendations as well as the foremen's are followed by improvements, detailed instructions, cooperation, and personal supervision."

> Accident prevention should be handled in the same way as operating difficulties. If it is going to cost more to pay for accidents than to prevent them, if the prospect is that every fourth, sixth, or tenth man on the plant will lose 20 to 35 days' work every year by accident and during that time be replaced by a less skilled employee who will have to be trained and will possibly cause vexatious delays and mistakes, and if better and safer working conditions attract better men, operating methods and instructions should be applied to the safety problem. The same methods that have been developed for efficiency may be used to increase safety.

Two methods are suggested for meeting the accident problem—the organization of a plant-inspection committee and of a foremen's committee. The first committee should inspect the plant every month on a certain date and should give particular attention to the study of accidents that have occurred during the preceding month, to the existence of improper physical conditions, to unsafe practices, and to first-aid instruction. It is believed that the cooperation of the men may be secured and their recommendations for betterment obtained by the installation of a "suggestion box" with a reward for the best suggestion, and by dividing the various crews under the different foremen into divisions with the presentation of a prize to the division that has had no lost-time accidents for one to three months or has reduced its percentage of accidents in that period. The foremen's committee should meet with the superintendent or assistant superintendent once a month for the purpose of discussing the causes of accidents that have occurred and of considering the recommendations of the plant-inspection committee with a view to putting into effect such as appear to be practicable. "However," suggests the report, "the final responsibility for safety work can not be placed on committees, gang leaders, or workmen. * * * To put safety work on a sound and sensible basis the foreman must give the subject serious observation, study, planning, and direction, such as is given to operating work. The safety of the workmen always has been given foremost attention by foremen, but the reduction in accidents effected by many companies indicates that this attention has been concerned more with obviously dangerous factors than with injuries due to hand labor, use of hand tools, falls, falling objects, and similar causes incident to daily work. To these causes, however, the greater part of blast-furnace accidents is due." Thus it is stated that at blast-furnace plants "hand labor and hand tools cause over 40 per cent of all accidents; if flying and falling objects and falls of persons are included, over 60 per cent of all accidents are represented; and if burns from hot metal and cinder are added, the total represents approximately 75 per cent of all blast-furnace accidents. This shows where the accident problem lies. Effective prevention of accident from these causes requires study, observation, experience, and instruction. No one in the plant is more capable of doing this than the foreman, no one is in such close contact with the men, and no one can combine such work with operating supervision so advantageously and effectively."

Approximately 50 pages of the bulletin are devoted to precautions to be observed at blast-furnace plants, in which a great many detailed suggestions are offered to foremen, the general force, the cast-house crew, hot-blast men, stove cleaners, dust-catcher men, stock-house crew, trestle gang and yardmen, pig-machine men, ladle-house men, slag-dump men, engine-room force, boiler-house force, riggers, millwrights and handy men, pipe fitters and tuyère gang, bricklayers, carpenters, electricians, and crane men. Most of the illustrations of the bulletin are included in this section.

The importance of ready access to an emergency first-aid box is emphasized, especially for plants where the continual presence of a doctor or nurse is not feasible. Such a provision, it is believed, encourages the workmen to form the habit of seeking immediate first-aid treatment for slight injuries—a practice which in many cases will prevent infection or illness. Suggestions are included for treating eye injuries; cuts, lacerations, and punctures; burns; fractures; blows on the head or abdomen; bruises and strains; and asphyxiation or shock. The importance of giving immediate attention to all injuries is strongly urged in order to avoid infection.

HEALTH CONSERVATION AT STEEL MILLS.

The United States Bureau of Mines has recently issued a pamphlet entitled "Health Conservation at Steel Mills,"[1] in which is set forth the importance of extending the "safety first" idea to include "health first," since in recent years there has been a rapid increase in the number and seriousness of occupational health hazards. In asserting that, aside from its humanitarian aspects, the prevention of conditions productive of ill health is a plain business proposition, the author asks the following pertinent questions: How many men in a plant are working hard and conscientiously, yet below their normal capacity, because of harmful or even uncomfortable conditions? Is not the efficiency of many a man below par because of some physical defect, as, for example, an error in vision, of which no one—not even himself—is aware? How much could his efficiency be increased by correcting the defect? Can not more and better work be accomplished with the same effort by those working in pleasant and healthful surroundings than by those working under conditions conducive to undue fatigue and to disease?

Education of workers which has operated to prevent accidents can be developed further, it is believed, so as to prevent disease and sickness.

As the first step in health conservation the author recommends a system of medical supervision, including a physical examination of all candidates for employment and of all men already employed, in order to prevent the introduction and spread of infectious or contagious diseases. From a humanitarian standpoint as well as from purely business considerations he regards it as highly important that disease be discovered in its incipiency in order that proper treatment may be provided and thus prevent the possibility, for instance, of a worker developing tuberculosis, which disease has been found to be the leading cause of death in 110 out of 140 classified occupations. This system of medical supervision, it is stated, should aim not only to maintain the health of the working force, but to provide advice for ailments and on "how to keep well," and to assist the management in providing employement for workers partly or wholly incapacitated by reason of physical infirmity from doing their accustomed work.

The author recognizes that undue fatigue is one of the most common causes of occupational disability and that fatigue-producing conditions can not be ignored without seriously affecting the efficiency of the working force. This fatigue is caused by laborious or fast work or long periods of work; monotony or complication of muscular movements; constant strain, as when fixed mental or visual attention is necessary to the performance of duties; constant standing, particularly on hard, unyielding floors, such as those of cement; lack of variation in muscular exertions, or lack of periods of relaxation. In addition to the amount and character of the work, the conditions under which it is performed seem to have an important bearing on fatigue. For instance, exposure to high temperature and high humidity, excessively bright or improperly placed lights, loud or continued noise, and constant vibration tend to cause fatigue.

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[1] Health Conservation at Steel Mills, by J. A. Watkins, passed assistant surgeon, U. S. Public Health Service. United States Bureau of Mines, Technical Paper 102, Washington, 1916. 36 pp.

The relation of industrial buildings to the health of employees is pointed out, emphasis being placed upon the necessity of providing natural illumination or adequate artificial illumination, ventilation, ample space for each employee, and proper flooring.

The report attaches considerable importance to the problem of proper illumination,[1] since this is intimately associated with efficiency, safety, and bodily welfare. In certain mills increased efficiency varying from 2 to 10 per cent has been reported as a result of improved lighting conditions. Natural illumination is, of course, to be preferred, but where impossible to secure a sufficient amount of this, artificial illumination must be used, in which case it is suggested that the lights should be placed so as not to shine directly into the eyes; glare and troublesome shadows should be avoided; reflectors of a proper design should be chosen; protection of workmen from intense and harmful light should be provided, the most effective protection being secured by the wearing of glasses or goggles of special coloring, according to the character of the light.

Two points of view are suggested in the consideration of adequate ventilation—(1) that of air renewal and (2) that of removal of the products formed in the industrial processes, including fumes, gases, or dust, and harmful conditions of temperature or humidity. Much dust in various forms is generated in a steel mill, and the inhalation of this dust is given as one of the greatest occupational hazards. "There is probably no condition that should receive more attention, or should be more speedily and effectively remedied, than that of suspended matter in the air." Respirators may be worn, but "a perfectly satisfactory respirator is yet to be devised."

> The only effective means of removing dust in workshops is by a carefully designed and constructed exhaust system. The place to collect and remove dust is at its source.

The conditions of temperature and humidity should receive attention, since it appears that continued exposure to high temperature and high humidity increases the susceptibility to disease and may cause muscular and joint pains, aches, cramps, and, in extreme cases, heat exhaustion. Thus it would seem to be important to provide a free circulation of air, to lower the temperature to which men are exposed, to reduce the length of exposure to heat, and to provide ample bathing facilities and plenty of drinking water of about 55° temperature for those who work in heated rooms.

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[1] An extended discussion of the question of illumination appeared in the MONTHLY REVIEW for July, 1916, pp. 101–107.

The report outlines the requirements of proper washing facilities, including wash and locker rooms, baths, washbasins, and lockers; suggests the importance of well-illuminated, well-ventilated, and sanitary water-closets; notes the beneficial results of an adequate supply of pure drinking water of proper temperature and so distributed as to preclude all possibility of contamination; and emphasizes the fundamentally important proposition that a workman should be supplied with ample food of good quality and at a moderate price, which may be provided by the employer through the establishment of a restaurant in connection with the plant.

Cooperation between employers and employees is stated to be an essential in securing the conservation of health in any plant. All provisions for the well-being of the workers are quite likely to be futile if the latter through ignorance or carelessness fail to observe the principles of health conservation. Therefore education is necessary and this, it is believed, may be brought about through the activities of the plant physician and by means of plant circulars, inserted in each pay envelope, forcibly bringing the fundamental principles of good health and of personal hygiene to the attention of the employees. By way of suggestion several such circulars are presented under the following captions: Protect your eyes; See the doctor; Be examined by a doctor; Workmen, take care of your health; Watch your teeth; Don't go home dirty; Watch your feet; Cut out the booze.

INDUSTRIAL DISEASES IN NEW JERSEY.

In New Jersey every physician attending upon or called to visit a person whom he believes to be suffering from poisoning from lead, phosphorus, arsenic, or mercury, or its compounds, or from anthrax, or compressed-air illness, contracted as a result of such person's occupation or employment, is required within 30 days after his first visit to report the case to the State board of health, and a penalty of $25 is imposed for violation of this provision. The State board of health, which is required to enforce this law, appears to be somewhat circumscribed in its power. The reason for this, according to the thirty-ninth annual report of the board, for the year ending October 31, 1915,[1] is that the board, while required to collect statistics of industrial diseases, to do all the clerical work in connection with the filing records, and then to transmit the data to the commissioner of labor, is given no supervision over an individual affected with a disease or over the factory in which such disease occurs. It thus finds itself in the position of obtaining statistics for the use of another department. The board believes that this work should be placed under the supervision of the commissioner of labor.

The report referred to states that during the year ending October 31, 1915, reports of industrial diseases were received by the State department of health, as follows:

	Cases.
Lead poisoning	56
Anthrax	6
Mercury poisoning	2
Arsenic poisoning	1
Total	60

Since it is stated that "this law is not enforced as rigidly as it should be," it is probable that the above statement is not a complete report of the cases of the industrial diseases named which occurred in the State during the year.

OCCUPATIONAL DISEASES IN THE CHEMICAL INDUSTRY.

An important feature of the fifty-third meeting of the American Chemical Society, held in New York City September 25 to 30, 1916, was the attention devoted to occupational diseases in the chemical trades. The symposium presented in the meeting of the industrial chemists and chemical engineers' division consisted of the following five papers:

Introduction, by Prof. Charles Baskerville, chairman of the committee on occupational diseases in the chemical trades.

The occupational hazard in the chemical industry; the need for prophylaxis, by Dr. J. W. Schereschewsky, surgeon, United States Public Health Service, Pittsburgh, Pa.

Industrial poisoning from analine and allied products, by George P. Adamson, Baker & Adamson Chemical Co., Easton, Pa.

Bureau of Mines' studies of occupational diseases, by Dr. W. A. Lynott, United States Bureau of Mines, Washington, D. C.

Dangers other than accidents in the manufacture of explosives, by Dr. Alice Hamilton, United States Bureau of Labor Statistics, Chicago, Ill.

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[1] New Jersey: Department of Health. Thirty-ninth Annual Report, 1915. Industrial diseases, p. 44. Paterson, 1916. 447 pp.

One object sought to be achieved in these papers seemed to be the bringing about of closer cooperation between the chemists and physicians in the investigation of occupational diseases. A general discussion followed the reading of the papers, participated in by Dr. W. Gilman Thompson, professor of medicine, Cornell University Medical College, New York City; Dr. F. L. Hoffman, statistician, Prudential Insurance Co. of America, Newark, N. J.; Dr. Francis D. Patterson, Department of Labor and Industry of the State of Pennsylvania; Dr. Lester L. Roos, medical inspector of the division of industrial hygiene, New York State Industrial Commission; Mr. Newell T. Gordon, Department of Labor of New Jersey; Dr. Tracy H. Clark, medical director, the National Union, Chicago; Dr. Royal Meeker, United States commissioner of labor statistics; Mr. C. I. Johnson, Goodyear Tire & Rubber Co.; Dr. L. F. Goodwin; Dr. Johnson,, of Syracuse; Dr. J. S. Millard, plant physician of the Goodyear Tire & Rubber Co.; and Prof. William P. Mason.

As outlined by Prof. Charles Baskerville, chairman of the committee on occupational diseases in the chemical trades, this committee exists for the purpose of securing "sane and uniform legislation" on this subject in all the States and to learn of specific conditions in particular chemical trades that might call for improvement, and to this end its members have sought information, solicited and offered advice, and cooperated with boards of health and private corporations. It is noted that some manufacturers are doing much toward the protection of their laborers, while others, "relatively few in numbers," are "absolutely inconsiderate." One of the important questions in connection with industrial diseases, in the opinion of Prof. Baskerville, is "is it possible to draw a distinction between the maladies which are the result of certain occupations and accidents?" It is in many cases difficult to ascertain whether a disease is the direct result of the nature of employment, "but the justness of the principle of compensation for so-called industrial diseases is generally accepted." Since the action of some chemicals is insidious and not always known, it seems to be of prime importance that the introduction of any novel substance into industrial operations or the introduction of a novel procedure should be studied to detect possible danger at an early stage, so that due precautions may be taken. In order to coordinate all lines of endeavor in the study of industrial hazards and the prevention of industrial diseases to the end that legislation founded on technical and scientific investigation may result, the chairman of the committee urged the establishment of a safety museum at Washington, where national, State, and municipal officials and representatives of selected lines of chemical activity may cooperate by conference and advice.

Dr. Schereschewsky, in his paper on the "Occupational hazard in the chemical industry," called attention to the necessity for adequate protection of workers because of the dangers peculiar to the industry as a result of the very nature of the substances dealt with. It appears that the chemical industry, the value of whose products increased 53 per cent in the period from 1909 to 1914, has received but little attention from the standpoint of industrial hygiene. The ordinary hazards of the industry, including inadequate illumination, dampness, stagnant air, exposure to extremes of cold and heat, long hours, fatigue, and monotony, were reviewed briefly, followed by a somewhat extended discussion of the specific hazards which include the effect on the body of irritating or poisonous dusts, fumes, and gases. Chief among these are the halogens (chlorine, bromine, and iodine) and their acids; nitrous fumes[1]; metallic vapors; arsenical vapors; gaseous blood poisons; carbon disulphide; fumes of coal tar and coal-tar products; certain organic compounds; and lead dust. The effects produced by each of these were discussed in some detail, and the necessity for exercising great care in order to avoid unnecessary disease and death was emphasized.

> The necessity for such surveillance is further emphasized when we consider that but a small proportion of the personnel of chemical establishments consists of skilled workers, the great majority being unskilled workers of foreign birth, who, besides having the most rudimentary ideas of personal hygiene, are ignorant of the nature of the substances which they handle.

Reference was made to the frequency of illness in the chemical industry, based upon foreign experience, and authorities were quoted showing that in Germany the number of sick days for each worker in chemical plants ranged from 6.73 to 10.2, and that only 12 out of 100 workers worked throughout the year without sickness.

The necessity for extreme caution, absolute cleanliness, and special care of health were emphasized in the paper on "Industrial poisons from aniline and allied products," by George P. Adamson. It appears that aniline may enter the body by absorption through the skin, by direct contact, or by saturation of the clothes, through the digestive organs, and through the respiratory organs as volatile particles. In mild cases the symptoms are anemia, general weakness, slight blueness or cyanosis, and gastric disturbances; jaundice may appear. In acute cases the symptoms are sudden prostration; cold, pale skin; blue lips, nose, and ears; diminution and even extinguishing of sensibility; small pulse; death in comatose condition, sometimes after antecedent convulsions. In the observation of the author, however, working in the fumes of aniline does not lead to any serious results nor is the poison cumulative. The only serious cases appeared to be those caused by absorption as a result of the oil splashing on the body without its immediate removal by washing. For this purpose dilute acetic acid was found very satisfactory. At the first symptoms of poisoning immediate removal from the workroom to a cool shady spot, change of clothing, cool effusions, and the administration of oxygen in connection with artificial respiration are suggested. However, the best means of reducing the danger appear to be the taking of proper precautions to prevent such poisoning, the most important precaution being cleanliness and the maintenance of proper health conditions.

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[1] A brief statement as to this poison is contained in the MONTHLY REVIEW for June, 1916, p. 87.

Some facts deduced by the Bureau of Mines from its study of occupational diseases were set forth in a paper by Dr. W. A. Lynott, who reviewed briefly several of the bulletins which have been published by the bureau on this general subject. The author remarked that tuberculosis among coal miners is uncommon; that asthma is rare; that no injurious effects of any kind attend work with radium during the processes of crystallization. Considerable attention was given to a synopsis of the bulletin on miners' nystagmus,[1] giving its causes, symptoms, and prognosis. The paper concludes with a review of the Bureau of Mines' bulletin on Health Conservation at Steel Mills.[2]

The concluding paper of the symposium was read by Dr. Alice Hamilton, the subject being "Dangers other than accidents in the manufacture of explosives." In this paper Dr. Hamilton gave the results of a personal study of occupational poisons in some 40 factories making high explosives in this country—a study conducted under the direction of the United States Bureau of Labor Statistics. Of some 30 to 35 poisonous substances which have come to her attention it was pointed out that by far the most important are the gases which are grouped together as the oxides of nitrogen, or nitrous fumes,[3] their importance arising from the fact that they are formed in all nitration processes used in the manufacture of explosives. It is stated that since the fumes are not irritating or corrosive, workmen often breathe enough to cause severe, even fatal poisoning, without realizing that anything dangerous is happening. The extreme danger attending the manufacture of picric acid is noted, the probable reason ascribed being the "hastily and poorly constructed picric-acid plants, put up to fill a single war contract and carried on with what looks like reckless haste, and I fear sometimes a good deal of ignorance, at least of the fundamental laws of hygiene." In the manufacture of this acid, besides the nitrogen-oxide poisons, Dr. Hamilton mentioned phenol, which may cause severe systemic poisoning, with dizziness, delirium, weakness, and collapse when spilled over a large surface of the body, and may even cause chronic Bright's disease if exposure to small quantities in the air is prolonged.

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[1] For an extended review of this bulletin see MONTHLY REVIEW for August, 1916, p. 43.

[2] See p. 97 of this issue of the REVIEW for a digest of this bulletin.

[3] A brief statement as to this poison is contained in the MONTHLY REVIEW for June, 1916, p. 87.

The dangerous effects of many of the more important poisons used in the manufacture of explosives are quite fully considered, special reference being made to benzol and toluene and their nitro and amido compounds, which act directly upon the nervous system; nitroglycerine; fulminate of mercury, which produces skin inflammation; ethyl nitrate; and tetrachlorethane,[1] used in the varnish for aeroplane wings. The paper suggests that the details of prevention must be solved in each instance, since it is a question of fumes and dust prevention and of proper provision for bodily cleanliness.

> The larger number of men are not susceptible to these poisons unless conditions are very bad and the exposure excessive, but a minority is susceptible and a small group is oversusceptible and will suffer unless extraordinary precautions are taken, and unfortunately there is no way of picking out this group in advance.

In the general discussion which followed the reading of these papers a number of important points were brought out. Dr. Thompson and Dr. Hoffman both favored the establishment of a safety museum, and the latter expressed the opinion that all industrial diseases will eventually be brought under the scope of compensation; also that all industries should be under direct medical supervision.

Dr. Patterson suggested the necessity for a law requiring physicians to report all cases of vocational diseases, and told of the efforts being made in Pennsylvania to secure legislation providing safety regulations for the manufacture of explosives, paints, and varnishes, and also covering the chemical industry.

Dr. Roos referred to the fact that manufacturers complain that laborers will not use hygienic safety devices provided for them, but took occasion to refute this by citing a plant in which, as the result of the installation of a comfort house which the men were required to use, the amount of poisoning and illness has been considerably reduced. He noted the fact that in his State there is under consideration an amendment to the law to require physicians to report all cases of occupational diseases.

Mr. Gordon emphasized the importance of an educational campaign in order that the men may be informed of the nature of the materials with which they work.

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[1] An account of this poison appears on p. 105 of this issue of the REVIEW.

Dr. Clark thought it would help materially to do away with occupational hazards if the medical staff of insurance companies might be directed to cooperate more with plant physicians.

Dr. Meeker declared that the relation of chemists to the workers deserves all the attention that can be given to it. He mentioned the necessity of revising the list of industrial poisons contained in Bulletin 100 of the Bureau of Labor Statistics and to this end urged the cooperation of every chemist and every industrial physician in the country. These poisons should be listed by industries and by occupations.

Mr. Johnson stated that the Goodyear Tire & Rubber Co. had recently changed from a 12-hour to an 8-hour day, resulting in considerable reduction in the amount of aniline poisoning. He thought it would be of advantage to give the extremely susceptible worker other work so that he might be removed from dangers of infection.

Dr. L. F. Goodwin related his personal experience with trinitrotoluol poisoning and suggested the necessity of finding antidotes for these industrial poisons.

Mr. Mason believed that the so-called immunities were of little consequence in considering the treatment of occupational diseases.

Dr. Millard doubted the value of the oxygen treatment in cases of aniline poisoning.

DOPE POISONING.[1]

"Dope" is a varnish used to cover the wings of aeroplanes to make them impervious to moisture and air. It consists of powdered acetate of cellulose dissolved in various organic solvents such as acetone, amylacetate, benzene, carbon tetrachloride, tetrachlorethane (acetylene tetrachloride), and others to bring the cellulose to the needed dilution. Tetrachlorethane is mainly used as an ingredient of this dope because of its comparatively low cost[2] and because it seems to have the remarkable property of tightening up the fabric which is stretched to form the wing in a way that nothing so far tried can do. Experiments conducted by representatives of the British factory department have shown conclusively that tetrachlorethane is a powerful cumulative liver poison and also that dope vapor is a liver poison, and that the poisonous property of the dope vapor is due to tetrachlorethane being present in it.[3] This is apparently true even though it is present in the dope mixture to the extent of only 10 or 12 per cent. The workmen seriously affected by this poison developed toxic jaundice in a few weeks' time, the symptoms being accompanied by little, if any, fever. "The men complained first of drowsiness and of nasty taste in the mouth and of the effect on the throat. There was a sickly feeling and marked distaste for food. There was, as a rule, very obstinate constipation and in some cases vomiting. Pain over the region of the liver and stomach was a prominent symptom in some. In very severe cases hematemesis or convulsions may occur. Coma generally supervenes and death results with suppression of the urine."[1]

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[1] Great Britain. Factory Inspector's Office. Dope Poisoning. [London] January, 1916. 4 pp.

[2] Acetone is said to be the best solvent, "but the current price of it is about £100 ($486.65) per ton, whereas tetrachlorethane is only £28 ($136.26) per ton."

[3] Great Britain. Annual report of the chief inspector of factories and workshops, 1914, p. 110.

It should be remembered in this connection that jaundice, which is a prominent symptom of illness due to the inhalation of tetrachlorethane, has been familiar as following upon, first, the inhalation of arseniureted hydrogen gas in chemical works; and, secondly, absorption of nitro derivatives of benzol in factories for the manufacture of explosives. However, it does not appear from any report so far issued by the factory department of the Home Office that tetrachlorethane poisoning results from operations in any other industry than the manufacture of aeroplanes. It is therefore safe to assume that the 57 cases of toxic jaundice (14, or 24.56 per cent, of which resulted in death) noted in the Board of Trade Labor Gazette for August, 1916 (p. 294), as having been reported to the Home Office for the seven months since January 1, 1916,[2] occurred in this one industry, while the 250 cases of lead poisoning (22, or 8.8 per cent, resulting fatally), 12 cases of mercurial poisoning (no deaths), 1 of phosphorus poisoning (not fatal), and 69 cases of anthrax (12, or 17.39 per cent, resulting in death), covering the same period, reported in the same publication, occurred in 24 specified industries as well as certain other industries not mentioned by name.[3]

In the leaflet under review, issued in January, 1916, it is stated that continued incidence of poisoning in aeroplane factories has led to the addition of the main symptom caused by tetrachlorethane—toxic jaundice—to the diseases which, if contracted in a factory, must be notified to the factory department.[4] Even at the date mentioned

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[1] Annual report of the chief inspector of factories and workshops, 1914, p. 109.

[2] Prior to Jan. 1, 1916, this disease was not reported to the factory department.

[3] A more adequate comparison might be made if the number of employees was known, but neither the factory department nor the Board of Trade Labor Gazette discloses this fact. In an article on tetrachlorethane poisoning attached to the report of the chief inspector of factories and workshops for 1914, submitted in September, 1915, the fact is noted that "the development in the manufacture of aeroplanes has been rapid, carried on as it is now—that is, at the end of 1914—in at least 27 factories employing roughly 6,500 workers. In one factory alone 1,500 hands are employed. Perhaps 300 persons—men and woman in equal proportions—are engaged in doping operations * * *." Among these employees 16 cases of toxic jaundice are noted as having occurred in the five months, June to October, 1914. This gives a sickness rate of 2.46 per 1,000 employed.

[4] It should be noted, however, that any illness attributable to the ingredients of the dope has been added to the schedule of diseases covered by section 8 of the workmen's compensation act of 1906.

43 cases of jaundice in aeroplane factories had come to the attention of the department, and of these cases 7 had resulted in death (2 males and 5 females), the fatal issue generally occurring in about a fortnight after the apparently slight initial symptoms had shown themselves. The report emphasizes the importance, since no efficient substitute for tetrachlorethane has yet been found, of providing adequate means for proper ventilation by dilution of the air so as to keep down the tetrachlorethane and other vapors to a nontoxic proportion. The standard needed for securing this appears to be 30 changes of the air of the doping room per hour, which, if maintained, has largely reduced the danger of toxic jaundice.

> The means of ventilation must be mechanical, preferably by volume or propeller fans, with free discharge to the open air. Owing to the high specific gravity of the vapor the fans should be fixed at the floor level, or below this level where space allows the construction of large ducts under the floor. Air inlets, of the hopper type, the total area of which should be not less than three times the discharge area of the fans, should be provided at the side of the room opposite the fans at a height of about 10 feet above the floor level.

It is stated that exhaust ventilation and separation of the process of doping from others is now recognized as indispensable in connection with doping the wings, but it seems that insufficient attention has been paid in some factories to the necessity of exhaust ventilation in all processes in which tetrachlorethane dope is constantly used. The process of "taping," in which, although a comparatively small amount of dope is used, the close application required brings the face right into the fumes, is specifically mentioned. The report notes the tendency in some factories to make the doping room too small.

Pending the introduction of an efficient substitute for tetrachlorethane it is regarded as important that occupiers should (in addition to provision and maintenance of a high standard of exhaust ventilation) consider and apply the following suggestions for safeguarding the health of workers:

> 1. Exclusion of other work from the doping room.
>
> 2. Alternation of employment. * * * In factories where alternation of employment has been arranged, e. g., two days doping and two in other work, or one week in and one week out, improvement in health has resulted. And when such an arrangement is adopted occasional necessary overtime might, it is suggested, be undertaken by those on the outturn, rather than by those who have already worked a full day in doping.
>
> 3. Periodical medical examination. A fortnightly medical examination has served useful purpose, both in reassuring the workers and also in enabling those showing premonitory symptoms to be suspended or transferred to other work. * * * After each visit the surgeon should state in writing the names of those (if any) whom he considers should be (*a*) suspended as definitely suffering from dope poisoning, necessitating absence from work until they are quite well, or (*b*) transferred temporarily to other work, as a precautionary measure on account of equivocal signs.

It is suggested that workers suffering from effects of dope should be excluded from all contact with it until they are well, medical certificates being obtained. Instances are said to be known in which premature resumption led to recurrence of symptoms in an aggravated form. New workers should be instructed as to how they can best avoid inhalation of fumes without interfering with work, and to this end the following suggestions are offered:

1. Doping should be commenced at the end of the wing nearest to the exhaust fans, and should proceed backward from that point.
2. In some factories the wings, as soon as the doped surface is "tacky," are carried to a drying room or closed chamber (separately ventilated), thus diminishing largely risk from inhalation of fumes. Where no such arrangement exists the wings should be placed to dry in a position between the workers and the exhaust draft, but not so as to obstruct the fans.
3. After doping the safest position for the worker is that nearest to the fresh-air inlets, but frequently men and women are seen standing close to the exhaust, and therefore breathing the air which is most highly charged with the noxious vapor; the reason being that either the flat top of the outlet duct has been found a convenient place to keep dope pots, brushes, etc., or the light is better there than at the far side. Shortsightedness, unless corrected by glasses, should debar from taping, if not from doping.
4. Work should not be commenced on an empty stomach, and where tetrachlorethane is an ingredient of the dope a worker "must not be allowed to take a meal or to remain during the times allowed to him for meals in any room in which such substance is used."

The report concludes with the suggestion that even if an efficient substitute for tetrachlorethane is found, exhaust ventilation will still be necessary to prevent the effects from such poisonous solvents and diluents as benzine, acetone, and methylated spirit, which must necessarily continue to be used.

ANTHRAX IN LONDON IN 1915.[1]

During 1915 the following seven cases of human anthrax occurred in London: (1) On the 19th February, 1915, a man, G. K., aged 52, developed a boil on the back of the neck. He was removed to the London Hospital and operated upon there, but died on the day following the operation. He had been occupied in making rugs at his home, from miscellaneous materials mostly said to be derived from the goat.

(2) On 23d April, 1915, a skin porter employed at the leather market, Bermondsey, developed a pimple on the cheek. He was removed to the Great Northern Central Hospital, the ulcer was

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[1] Quoted from the report of the county medical officer of health and school medical officer, for the year 1915. London County Council, August, 1916.

excised immediately, specific serum treatment was applied, and the patient recovered.

(3) On the 26th June, 1915, J. M., aged 26 years, a tea packer, developed a boil on the forehead. He was admitted to the Royal Free Hospital and recovered. The source of infection was not discovered.

(4) On 8th July, 1915, Mr. Luxmore Drew held an inquest on the body of a solicitor's clerk (H. C.), living in Paddington, who died from anthrax at the West London Hospital; the disease began in the neck. The man (aged 38) had had nothing to do with animals or hides, wool, or skins, but it was stated at the inquest that his mother had bought him a new shaving brush at the shop of a local chemist about a week before his death.

Dr. Elworthy, the pathologist to the hospital, verified the fact that the man had died of anthrax. He also examined the shaving brush and found it to be infected with anthrax spores. His experiments (see Lancet, 1st January, 1916) showed that anthrax spores may remain dormant in the hairs of brushes throughout the process of manufacture, and thus the disease may appear after the distribution of the manufactured article. The brush was one of six obtained by a chemist in Paddington from a wholesale firm in Finsbury on 11th May, 1915. It was the only one of the six sold by the chemist. The others were examined by Dr. Elworthy and found to be infected with anthrax. Inquiries were then extended into the earlier history of the brushes. The bristles were found to be largely composed of mixed hair of Chinese origin, chiefly goat, horse, pig, and human hair. Before the war such consignments of hair were usually sent to dealers in Switzerland, who transmitted them to Germany, where they were graded and cut into lengths after being disinfected, and returned to Switzerland, from whence they were exported to wholesale manufacturers in this country. After the outbreak of war, however, these hairs were imported into this country direct from China, and, being labeled as "goats' hair," escaped the Home Office regulations with regard to disinfection.

It appears that a consignment of these hairs conveyed by a Japanese vessel was purchased through certain brokers by a firm in London in September, 1914, who sent them to manufacturers in the Midlands for making into shaving brushes. About 1,500 of these brushes were distributed to various wholesale and retail vendors, both in this country and in the colonies; amongst these was a firm which supplied the local chemists with the brush used by H. C.

The matter was reported to the Local Government Board, and it was arranged that that board would take steps to collect the brushes in the Provinces, while the London County Council would deal with those sold in London. The medical officers of the city corporation and the metropolitan boroughs in which the brushes had been distributed were informed, and where the brushes were unsold they were collected and dealt with, but a number had already been disposed of to casual customers and could not be traced.

(5) In the course of inquiries another case of human anthrax was discovered in Deptford in July, and it was found that the patient, who was a hawker, had obtained a shaving brush from a shop receiving its supply from the suspected assignment. Dr. Elworthy examined the brush used and found it to be infected with anthrax. It was also ascertained that three other cases had occurred outside of London—one at Bristol, another at Southall, and a third at Coventry (see Lancet, Jan. 29, 1916)—and in all three instances the infected persons had bought shaving brushes shortly before contracting the disease. These brushes were obtained by the vendors from the factory in the Midlands previously referred to.

These cases constitute the first known instances of anthrax being traced to infection from shaving brushes, and but for the timely discovery of Dr. Elworthy and the subsequent administrative action taken an outbreak of more serious dimensions might have occurred.

(6) W. E., an electrical fitter employed at the war office, was notified on November 28, 1915, as suffering from anthrax. He was removed to the Middlesex Hospital, where, after appropriate treatment, he recovered. Inquiries were made, but no light could be thrown upon the source of infection.

(7) E. M., aged 29 years, was employed by a firm of hair dealers and notified at Guy's Hospital on December 8, 1915, to be suffering from anthrax. The local lesion was excised and the patient recovered.

INFLUENCE OF OCCUPATION ON HEALTH DURING ADOLESCENCE.[1]

In a bulletin setting forth the influence of occupation on health during adolescence, the United States Public Health Service presents the report of a physical examination of 679 boys between the ages of 14 and 18 years in the cotton industries of Massachusetts, a study made in cooperation with the Massachusetts Child Labor Commission and the State Board of Labor and Industries with a view to standardizing methods of oversight of such persons to protect their health in the industries. While the investigation was somewhat limited in scope and apparently disclosed no need of any new industrial legislation, it seems to have shown that the matters deserving of greater attention are rather matters awaiting the slow building up of an effective organization for carrying out already existing provisions of law. The prevention of the defective physical conditions disclosed by the actual physical examinations of the boys would seem to be a health problem rather than an industrial problem. "The defective physical conditions found are to some extent the results of bad heredity and disease accidents in early life, but to a greater extent they reflect ignorance and neglect."

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[1] Influence of occupation on health during adolescence, by M. Victor Stafford. United States Public Health Service, Bulletin No. 78. Washington, 1916. 52 pp.

Under the Massachusetts law no child under 14 years of age is permitted to be employed in any capacity in an industry like a cotton factory. No person under 18 can be employed in a cotton factory without an employment certificate issued by the local school authorities certifying that the person has complied with certain educational requirements prescribed by law, and if the person be under 16 years of age he must have, in addition, a certificate from a physician authorized by the school authorities declaring him to have been physically examined and found physically fit to perform the particular kind of work specified in the certificate. A change in the character of the work calls for a new certificate. Thus "every boy who was physically examined in this investigation, and who started to work before he was 16, has been examined by a physician under the direction of the local school authorities before he was allowed to go to work."

Every cotton-manufacturing center of the State was covered by the investigation, the mills in each locality being selected so as to secure physical examinations (1) of boys from mills of both old and modern construction, (2) of boys employed in the manufacture of all the different varieties of cotton fabrics represented in the locality, and (3) of a sufficient number of boys of each nationality or race represented among mill employees to justify comparisons. These physical examinations were supplemented by a study of records of the hospitals in Lowell, Lawrence, and Fall River relative to the causes of admission of cotton-mill operatives whether as dispensary or hospital patients. In considering the tabulation of diseases and defects disclosed by the physical examination of the boys the report calls attention to the fact that the investigation was made in a State which has been a pioneer in the matter of industrial legislation; a State that is free from hookworm infection; practically free from malaria; with a very low typhoid fever morbidity rate; and where the prevention of tuberculosis and protection of public health generally has been given considerable attention.

In a brief description of the manufacture of cotton fabrics it is pointed out that practically all the minors employed were engaged in work requiring very little actual physical exertion at any time and involving but slight hazard in the way of industrial accidents. Out of 679 boys examined not more than 2 showed permanent results of injuries possibly received in the cotton industry. However, the report indicates that there are certain processes which do involve possible hazards of chemical poisoning, but so few boys were found employed in these particular occupations that the report devotes little attention to them. "So far, therefore, as physical effects of usual cotton-factory work in the State of Massachusetts on male minor employees are concerned, the hazards of the industry practically are reduced to the possible effects on the minors of the atmospheric conditions of the mills, not merely on the healthy and vigorous, but on those who may be in some way or other abnormal."

As indicating that the cotton factory does not appeal to the average boy when it comes to furnishing more than a temporary job, the report cites the fact that of 679 boys examined, 425 (62.6 per cent) were over 16, and 198 (29.2 per cent) were over 17 years of age, yet only 203 (29.9 per cent) had a total of 2 years' employment and but 78 (11.5 per cent) a total of three years. The mill employment of 220 boys (32.4 per cent) was of less than 6 months' duration.

As to the education of these 679 boys, it was found that only 59 (8.7 per cent) had attended high school, and 237 (34.9 per cent) had not succeeded in reaching the sixth grade of a grammar school or its equivalent; 11 were illiterate. The report suggests that there are many good reasons why the education of these 237 boys ended where it did. It appears from the tabulation of diseases and defects, shown hereafter, that some had serious unrecognized defects of eyesight incompatible with progress in school; that some were deaf; that some evidently had during their school days diseased conditions of the nose, throat, and mouth, or other neglected physical defects; that "others simply lacked the mental capacity to go any further in school than they did."

The names of 81 diseases and defects found among these 679 male cotton-factory employees between 14 and 18 years of age are tabulated, with the aggregate length of employment in the cotton-manufacturing industry. In all, 3,180 cases are recorded, indicating that many of the boys suffered from more than one defect. In the following table these diseases and defects are condensed into 14 groups, showing the number and per cent of cases in each specified group:

GROUPING OF DISEASES AND DEFECTS FOUND AMONG MALE COTTON-FACTORY EMPLOYEES BETWEEN THE AGES OF 14 AND 18, SHOWING NUMBER AND PER CENT OF CASES IN EACH SPECIFIED GROUP.

Group.	Cases.	Per cent.	Group.	Cases.	Per cent.
Physically undeveloped	193	6.07	Cardiac disease	22	0.69
Defective vision	188	5.91	Diseased glands	413	12.99
Acute eye diseases	27	.85	Skin diseases	67	2.11
Defective hearing	151	4.75	Orthopedic defects	39	1.23
Defective nasal breathing	383	12.04	Mental defectiveness	33	1.04
Hypertrophied tonsils	260	8.18	Miscellaneous defects	218	6.86
Defective teeth	1,153	36.26			
Pulmonary disease	33	1.04	Total	3,180	100.00

The report comments on a number of these defects, noting particularly the fact that the irritant effect of the atmosphere of the mills or of gases or chemical vapors on the respiratory tract was comparatively negligible, since in 499 cases (73 per cent) the mucous membrane of the nose and throat was normal; that 388 (57.1 per cent) of the boys had decayed teeth demanding immediate attention; that not a single case of tuberculosis of the lungs was found, a fact, however, "of little value as evidence in tending to indicate whether cotton-mill work predisposes to pulmonary tuberculosis or not," since all the boys examined were under 18 years of age and nearly half of them had worked less than one year and only a few for more than four years. The report states that "the freedom of boys from skin diseases was remarkable." One boy showed signs of rickets, and three had chronic nephritis or Bright's disease.

As already indicated, the investigation seemed to show that health hazards must be sought in the atmospheric conditions of the mills and it was found that marked differences in the air conditions in different mills did exist. It is explained that a fairly high percentage of relative humidity evenly distributed through a room is essential to the conduct of the industry, and that when the machines are started a large amount of heat is generated. These factors "cause a tendency toward unnecessarily high temperatures and high relative humidity in cotton mills and a reluctance to admit outside air unless these matters be automatically controlled." This matter of temperature and humidity in Massachusetts industries has been made the subject of statutory regulation.[1]

It was found that most of the boys examined in the autumn and early winter on clear, dry days were working in a mill temperature of about 75 degrees with a relative humidity of probably 70 per cent.

The report suggests that the great danger at present of improperly issuing employment certificates arises from the fact that those authorized to make the physical examinations find it impossible to give sufficient attention to individual cases, and are not themselves in actual touch with the occupations concerned. The following recommendations are made:

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[1] Ch. 543, sec. 5, Laws of 1910.

For the reasons above stated it is recommended that the authority to issue a working certificate to a minor be vested exclusively in some central State agency, a part of whose functions it is to know actual working conditions in any occupation in the State—such certificate to be issued on a formal prescribed application, calling for any information deemed desirable regarding the applicant and including the approval of the local school committee and evidence satisfactory to such central State authority of physical fitness as shown by a detailed report on a prescribed form of a physical examination of the applicant. Instead of having an employment certificate practically irrevocable as at present and attempting to safeguard certificates by care in the selection of a few authorized examining physicians, it is recommended that the central State authority may, if it deem advisable itself and shall as a matter of course on request of the local school committee, limit the life of a certificate and make its reissue dependent on the reapproval of the local school committee and another physical examination. It is also recommended that the central State authority may accept a report on the prescribed form of physical examination of an applicant from any registered physician in the State, approved by the local school authorities, but that the central State authority shall have power to require that a report as to the physical condition of a minor applicant or a minor at work be furnished in any case or at any time by a medical officer in the employ of the State. It is believed that changes in the present law to the effect just indicated would result in insuring a much better and highly desirable control over the educational interests and physical welfare of minor wage earners in the State.

STANDARDS OF HEALTH INSURANCE.

In a volume entitled "Standards of Health Insurance,"[1] the author, I. M. Rubinow, outlines the basic principles underlying a broad system of health insurance, with the expressed hope that it will be of some assistance to those who are trying to teach it to the public, or who have gone so far as to prepare drafts of legislative enactments. For the benefit of those unfamiliar with this subject, certain essential considerations upon which the propaganda is based are suggested:

1. Since "insurance is a provision made by a group of persons, each singly in danger of some loss, the incidence of which can not be foreseen, that when such loss shall occur to any of them, it shall be distributed over the whole group" insurance is evidently a method well adapted to mitigate the destructive effects of illness.

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[1] Standards of Health Insurance, by I. M. Rubinow. Henry Holt & Co., New York, 1916. 322 pp. $1.50, net.

> 2. The wageworker stands in greater need of health insurance, because, first, his economic status depends much more closely upon preservation of health; second, as a result of the unhygienic or harmful conditions of his life and work he is very much more susceptible to ill health than the members of the employing or all property-owning classes.
>
> 3. The advantages of health insurance are clearly demonstrated by the rapid extension of private health insurance of various forms, commercial as well as mutual.
>
> 4. The experience of Europe demonstrates that public concern in health insurance for the wageworking class is almost universal in all industrial countries.

The author discusses the benefit of health insurance; gives an estimate of the cost, and suggests the proper way of apportioning it; outlines the organization of health-insurance associations and of medical aid; notes the necessity for a compulsory plan; and answers some of the objections to the system as a whole. The question of constitutionality is presented in an appendix by Prof. Joseph P. Chamberlain, of the legislative drafting bureau of Columbia University.

The necessity for health insurance legislation in this country, growing out of the demand for it among the laboring people and those vitally interested in social insurance of all kinds, is emphasized.

> If the harmful effects of the increasing cost of living will be counteracted, if organized society intends to undertake a serious campaign for prevention of destitution, if, finally, the movement for conservation of the health of the Nation is to have any meaning at all, then health-insurance legislation becomes the burning issue of the hour.

Almost all the other benefits of a system of health insurance seem to depend upon whether a voluntary or compulsory system is contemplated. In arguing for the compulsory plan the author draws largely from the experience of Denmark, Germany, and Great Britain, representing three distinct types of health insurance, respectively: (1) Voluntary insurance with State subsidies; (2) compulsory insurance with a practically prescribed insurance carrier; (3) compulsory insurance with freedom of choice of insurance carrier.

European experience has apparently convinced the author that a compulsory health insurance act should be broad and general in its application, including agricultural laborers, domestic servants, home workers, casual and irregular employees, Government employees, and clerical employees, and that a voluntary system may be operated in connection with a compulsory system so as to cover those who, for one reason or another, do not benefit by the latter.

When it comes to determining the scope of health insurance the author admits the difficulty of drawing an exact line of demarcation between disease and industrial injury, but notes that it is the uniform practice in practically all health-insurance systems to treat cases of nonindustrial accidents in the way in which cases of sickness are treated. So far as industrial accidents are concerned the question becomes more complicated because in many States these are largely covered by the provisions of compensation laws.

Health insurance, it is believed, should supplement accident compensation also in the medical aid rendered and in its coverage of occupational diseases, but it is thought unwise to combine it with invalidity insurance as has been done in Great Britain.

The author devotes several chapters to a discussion of the benefits derived from health insurance, including medical, money, maternity, funeral, and optional benefits. The first should include medical treatment, supplies, and institutional care; money benefits should not be uniform, since they would be too high for some workers and too low for others; and the waiting period should be "based upon a priori reasoning rather than precedent," since standards established in European countries are found to differ materially. It appears that practically every existing system of compulsory health insurance offers maternity benefits, and the author believes that this phase of social insurance should be made a part of health insurance instead of being conducted as a separate system. The established extravagance in funerals, especially among the poor, is commented upon, and it is stated that the "assumption of this burden by the sickness benefit would establish one fairly uniform standard the acceptance of which would not mean loss of caste."

The author points out that all compulsory health insurance systems (with the exception of those of Roumania and Holland) not only require employees to insure, but also make it obligatory for employers to contribute to the cost, although the amount of such contribution is subject to variation. In Great Britain there is in addition contribution from the public treasury. It is assumed that the workmen themselves will contribute to any system of health insurance, a policy which would give them "democratic participation in the administration of the funds, such as would be quite impossible under a system of gratuitous pensions. The working class has amply demonstrated its ability and willingness to develop mutual insurance." As to the distribution of the cost among employers, workmen, and the public treasury, the author suggests an equal division as the natural and easiest way of solving the problem,[1] but admits that the suggestion lacks a logical foundation and states that "the actual distribution will in each case depend more upon bargaining power and the interaction of political influences than upon any definite economic or actuarial reasoning."[1] The author recognizes the argument advanced by some that a reduced contribution should be expected from low-paid labor and a correspondingly higher contribution from employers of such labor.

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[1] "In Germany the employer contributes a sum equal to one-half of the employee's contribution, or one-third of the total. In the insurance system of Hungary and Serbia the employer and employee contribute equal amounts." In Great Britain "the insured pays 4d. [8 cents], (females, 3d. [6.1 cents]) per week, the employer 3d. [6.1 cents], and the State, in a somewhat indirect way, 2d. [4.1 cents]."

Since the stated object of social health insurance is to give the insured as large a return for their contribution as possible, "practically all social insurance against sickness in Europe is conducted by institutions or organizations of a public character, with the element of commercial profit entirely eliminated." The author warns against the suggestion that private stock companies, operated for profit, may be utilized in this branch of social insurance as they have been in compensation, and deprecates the participation of mutual private insurance companies. He also doubts the advisability of adopting the method of direct insurance by the State. Outside of Great Britain "the entire lesson of history is in favor of the 'local' public fund, whether built upon trade lines, where the number of insured is sufficiently large, or embracing all the wageworkers of a locality."

In the administration of these local "public" funds both employers and employees should be equally represented in the management of the funds, but "it seems more desirable that no official representatives of the State authority be directly concerned in the administration of these associations." Every local association should be subject to a central organization, either the State industrial commission or the State labor department.

It is recognized that the amount of the contribution must depend upon the benefits rendered and that this should bear some relation to wages, since benefits do. Just how to determine the amount of the contribution appears to be a very difficult problem, because many factors enter into the consideration. The conclusion is that "it is quite unnecessary and, in fact, very dangerous, to embody any definite rate of contribution in the act. This may be safely left to the individual insurance carriers to be established by their by-laws, subject to the control of the commission." The establishment of rates in relation to wage groups, age, occupation, and hazard is discussed.

Owing to the importance of the organization of medical aid, involving its relation to private practice, freedom of choice of physicians, organization and distribution of medical supplies, and administration of institutional treatment, a separate chapter is devoted to this subject.

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[1] The basis of distribution as fixed in the bill prepared by the American Association for Labor Legislation is 40 per cent by employers, 40 per cent by employees, and 20 per cent by the State.

An important feature of the organization of health insurance is its probable cost, and of this the author gives an estimate, based upon the fixity of benefits and contributions adjusted to the cost, and concludes, on the basis of German experience, that it seems very probable that the total cost for the entire system will approximate 4 per cent [of the wages] on an average, and in a good many localities or industries will rise even higher. It is doubtful whether anywhere it will be below 3 per cent. The law might reasonably state the limits between 3 and 5 per cent. This cost (a maximum rather than a minimum or probable cost) the author has distributed as follows:

	Per cent.
Money benefits	1.908
Maternity benefits	.072
Funeral benefits	.432
Medical aid	1.338
Total	3.750

Considering all the benefits and the probable cost of a system of health insurance as herein outlined, the author concludes that "it is decidedly worth while." But in order to avoid levying, in its entirety, upon wage earners the cost of such a system, it is suggested that "the distribution of the cost between the employer and employee, with a substantial contribution from the State, is the only way in which this large program may be realized."

PROPOSED AMENDMENT OF THE BRITISH NATIONAL HEALTH INSURANCE ACT.[1]

On January 27, 1916, the British treasury department appointed a committee composed of representatives of the department, members of the National Health Insurance Commission, officials of insurance companies and of friendly societies, trade-union representatives, actuaries, and other parties interested, to consider and report upon amendments to the health insurance act of 1911 so far as relates to its financial aspect, and to consider how far the work of approved societies, the carriers of the insurance under the act, may be simplified in its administration. On May 11, 1916, a preliminary report was filed by the committee, known as the departmental committee on approved society finance and administration. Discussing merely the financial phase of the work delegated to it, the committee points out that the normal operation of a general scheme of insurance based on a flat rate of premium—the scheme adopted under the British health insurance act, 1911—rests, of course, upon an average which when applied to different classes of the population may show marked deviations, according as the composition of the particular section conforms to or varies in one direction or the other from that of the main body or as the conditions influencing claims on the funds may vary. But the national health insurance scheme, the committee notes, can not be said to satisfy the usual requirements of a flat-rate system. Furthermore, Parliament, by leaving the formation of the approved societies, the carriers of the insurance, unrestricted and free, contemplated a departure in one fundamental aspect from the normal working of the flat-rate system. "Though prosperous and less fortunate societies must of necessity go to make up the national aggregation and, on the original assumptions, to produce a solvent position, the prosperous societies were to enjoy the whole (or a greater part, in certain cases) of their surplus, while the less fortunate had entirely, or to a great extent, to rest upon their own resources." Thus there was no pooling of the resources or the deficits in order to balance their losses or surplus and therefore to bring them within the normal operations of a flat-rate system of insurance.

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[1] Great Britain. National Health Insurance. Interim Report of the Departmental Committee on Approved Society Finance and Administration, May, 1916. London, 1916. 39 pp.

In order to test the general working of the scheme, the committee had been supplied with data based upon the experience of societies including among their membership the great majority of insured persons. The committee excluded disability benefit from the comparison thus made, for the reason that this benefit came into operation as recently as July, 1914. The expected cost of disability benefit will increase continuously for a number of years, and while in the first 18 months of its operation the cost had been within the expectation appropriate to that period in the case of both men and women, experience of its normal working must be gathered before conclusions can be drawn.

The actual and expected expenditure per member for sickness and maternity benefits are shown below for both sexes for the years 1913, 1914, and 1915, in pence per week:

ACTUAL AND EXPECTED WEEKLY EXPENDITURE PER MEMBER FOR SICKNESS AND MATERNITY BENEFITS, BY SEX, 1913, 1914, AND 1915.

	Actual expenditure.	Expected expenditure.
Men:		
1913	2.76d. (5.60 cts.)	2.80d. (5.68 cts.).
1914	3.03d. (6.15 cts.)	3.00d. (6.09 cts.).
1915	2.76d. (5.60 cts.)	3.00d. (6.09 cts.).
Women:		
1913	2.51d. (5.10 cts.)	1.78d. (3.61 cts.).
1914	2.60d. (5.28 cts.)	1.85d. (3.76 cts.).
1915	2.04d. (4.14 cts.)	1.85d. (3.76 cts.).

Taken as a whole, the three years' experience, in the opinion of the committee, shows that there is a general sufficiency of contributions in the case of male members of the societies; and unless post bellum conditions result in a general increase in the rate of sickness claims, no unfavorable result need be expected. Although this is true of the general level of contributions, individual societies drawing their members from particularly hazardous occupations or living in unhealthy surroundings will consistently show a rate of sickness in excess of the average.

With respect to women members, the working of the insurance act fell short of the assumption involved in the original basis of the scheme. The data show a general insufficiency in the income payable to the benefit funds. Married women, in particular, appear to be subject to a greater amount of sickness than women generally, and this excess is shown in the experience of societies in proportion to the number of married women included in the membership.

The committee hastens to allay any apprehension as to the financial stability of the societies under the scheme, since the present law provides means by which societies can regain a position of financial equilibrium by reducing the benefits or increasing the contributions of the members. It is none the less true that a number of the societies will inevitably find a deficit on making evaluation.

Precluded by the instructions in its appointment from seeking a remedy for these difficulties in the direction of additional State funds or of an increase in rates of contributions or in a reduction of rates of benefit, the committee suggested relief of the financial situation of the approved societies by releasing a part of the contributions to the sinking fund to meet current needs. The scheme as outlined by the committee provided (1) an immediate increase in the income available to societies for the payment of benefits to women generally (increase of benefit fund); (2) special provision for the claims falling upon societies by reason of married women members (creation of a women's equalization fund); (3) accumulation of a special reserve fund as a measure of precaution, to meet, if necessary, the indirect but possibly prolonged effects of war service upon the general sickness rate of male members; (4) placing in the hands of all societies, whether composed of men or women, or partly of both, additional moneys to meet contingent liabilities growing out of excessive claims for sickness disability or maternity benefits (creation of a contingencies fund); (5) provision for further deficiency due as special risks in its societies containing an abnormal number of persons below the average in health (creation of a special risks fund).

The first four funds mentioned above should be made available for immediate application in cases of deficiency on valuation. The men's special reserve fund and contingencies fund should be credited to each society in proportion to the contributions of its members, and the women's equalization fund and the special risks fund should be central funds for the whole United Kingdom.

The following statement shows in detail the several allocations of moneys referred to above from sinking-fund resources:

ALLOCATION OF THE RESOURCES OF THE SINKING FUND AS PROPOSED BY THE COMMITTEE.

	Men.		Women.	
	Rate per weekly contribution.	Total annual amount.	Rate per weekly contribution.	Total annual amount.
To benefit fund			17d. ($0.35)	£145,000 ($705,643)
To women's equalization fund			16d. ($0.32)	[1] £135,000 ($656,977)
To men's special reserve fund	12d. ($0.24)	£250,000 ($1,216,625)		
To contingencies fund	35d. ($0.71)	£710,000 ($3,455,215)	34d. ($0.69)	£280,000 ($1,362,620)
To special risks fund	9d. ($0.18)	£180,000 ($875,970)	8d. ($0.16)	£70,000 ($340,655)
Total	56d. ($1.13)	£1,140,000 ($5,547,810)	75d. ($1.52)	£630,000 ($3,065,895)
The appropriation of the above items would leave for interest and redemption of reserve values—				
Interest	100d. ($2.03)	£1,500,000 ($7,299,750)	75d. ($1.52)	£460,000 ($2,238,590)
Redemption of reserve values		£560,000 ($2,725,240)		£170,000 ($827,305)
Grand total	150d. ($3.16)	£3,200,000 ($15,572,800)	150d. ($3.04)	£1,260,000 ($6,131,790)

[1] It is assumed that Parliament will be asked to provide a grant of an equivalent amount.

Other recommendations of the committee included the following: (1) A repeal of the provisions of the act requiring branches of societies (in certain cases, societies) to contribute up to one-third of their disposable surplus to deficits of other branches or societies; (2) pooling of the contingencies fund up to 50 per cent thereof of societies having less than 1,000 members; (3) withdrawal of the power granted to societies to associate voluntarily for pooling purposes, subject, however, to a special reservation in favor of societies with a common origin or interests, and of employers' provident funds; (4) the contingencies funds of societies, so far as not required to provide against deficiencies, to be available for additional benefits to members after the second valuation; (5) societies to be enabled, in view of the modification in their financial position involved in the foregoing proposals, to reconsider any arrangements as to their valuation of their members resident in different parts of the United Kingdom; (6) the rate of interest assumed in the financial basis of the acts to be maintained at 3 per cent; (7) the valuations of societies to take place at quinquennial instead of triennial intervals;

(8) the foregoing scheme to run for a period of 10 years from the commencement of benefits (with the effect of extending the term of the sinking fund by about 6 years) and the matter then to be reconsidered in regard to the amounts to be carried to the contingencies and special risks funds, the source from which those moneys have been provided, the provisions governing the women's equalization fund, and the position generally in the case of mixed societies; (9) arrangements to be made for securing full statistical data in regard to the experience of men and women respectively; (10) compulsory separation of men's and women's funds not to be made, but facilities for the separation of men's and women's funds to be afforded where desired by a society.

SICKNESS INSURANCE IN AUSTRIA, 1912 AND 1913.

INTRODUCTION.

The Austrian sickness insurance system in its present form is based on the law of March 30, 1888, which came into force on August 1, 1889. Sickness and accident insurance in Austria are closely united by the provision of article 1 of the sickness insurance law, stating that the persons subject to the compulsory accident insurance are also subject to the compulsory sickness insurance. The classes of persons subject to the compulsory sickness insurance are workmen and low-salaried administrative officials in all enterprises regularly carried on with some permanency of operations and conducted for profit. Persons employed in home-working industries, agriculture, and forestry are not subject to the compulsory sickness insurance, but may insure themselves voluntarily under the provisions of the law, if their employers agree. Administrative officials earning 2,400 crowns ($487.20) or more are exempt.

The sickness insurance funds established under the law must provide benefits, first, for cases of sickness causing disability for more than three days, and, second, for cases of accidental injury during the first four weeks of disability, if the accident is one which is entitled to compensation under the accident insurance law. For female members benefits must be paid for at least four weeks after childbirth. A funeral benefit must be paid if the disability results in death.

The benefits provided by a sick fund must not be less than the following: From the beginning of the sickness, free medical treatment, as well as free medicines and therapeutical appliances; in case the sickness lasts more than 3 days and the sick person is unable to work, a pecuniary benefit amounting to 60 per cent of the locally current rate of wages for ordinary day labor for each day of sickness for a period of 20 weeks; in case of death, a funeral benefit of not less than 20 times the rate of wages mentioned above. Instead of the free medical treatment, free medicines, and pecuniary benefit, the sick person may receive free treatment in a hospital, and in that case, if he has dependents, these receive at least one-half of the pecuniary benefit. The law authorizes the sick funds to increase the amount of the pecuniary benefits, but fixes a maximum for such increases.

The means for the support of the various sick funds are procured by assessments levied in the form of a percentage of the wages of the insured persons. The latter pay two-thirds and the employers one-third of the rate fixed by the fund. The maximum rate permissible is 3 per cent of the wages used as a basis for computing the benefits. No person compelled to insure pays an entrance fee. Persons insuring themselves voluntarily, however, must pay such a fee, equal in amount to 6 weeks' dues.

The principal carriers of the sickness insurance are the district sick funds, organized on geographical lines. In addition to these, the law recognizes as carriers the establishment, building trade, association, and guild sick funds.

OPERATIONS IN 1912 AND 1913.

The latest report on statistics of the operations of the Austrian sickness-insurance system has been published by the ministry of the interior as a supplement to the June number for 1916 of the "Amtliche Nachrichten des k. k. Ministeriums des Innern betreffend die Unfall- und Krankenversicherung der Arbeiter," and deals with the results for 1912 and 1913. The report states that the data presented for 1913 are incomplete for various reasons connected with the outbreak of the war (occupation of some districts by the enemy, calling in of fund officers to the army, etc.), and are therefore not quite comparable with data for preceding years.

The number of sick funds in 1912 shows an increase of 23.6 per cent over that in 1890, and the membership an increase of 138.5 per cent. In 1912 the population of Austria was estimated to be 28,748,850; the membership of all sick funds being 3,694,114 was, therefore, 12.9 per cent of the population. Of the total average membership for 1912, 2,821,361 were male members and 872,753 female members. The corresponding figures for 1913 were 2,550,710 and 832,698.

In 1912 (the data for 1913 are not comparable on account of their incompleteness) the average number of funds increased by 19, and the average membership by 90,593, or 2.5 per cent, as compared with the corresponding data for 1911. The district funds formed 17.3 per cent of the total average number of funds; the establishment and building-trade funds combined formed 36.9 per cent; the guild funds

38.3 per cent, and the association funds 7.5 per cent. These percentages vary only slightly from the corresponding percentages for 1911, which were 17.3, 37.2, 38.3, and 7.2, respectively. Of each 100 members 43.1 were insured in district funds, 21.8 in establishment or building-trade funds, 17.1 in guild funds, and 18 in association funds. The corresponding figures for 1911 were 43.3, 22.1, 16.8, and 17.8. The average membership per fund increased from 1,078 in 1911 to 1,099 in 1912, and in 1913 decreased again to 1,074.

The number of days of sickness per member of all sick funds combined varied from 9.13 in 1911 to 8.9 in 1912, and rose again to 9.45 in 1913. There has been a steady decrease in the number of childbirths, as reported by the sick funds. The mortality rate among members of sick funds is considerably lower than the general mortality rate in Austria, explained by the fact that the insurance system includes only able-bodied and active persons.

The establishment funds show the highest proportion of sickness or disability cases (Table 4), due to the fact that the members of these funds are mainly employed in the large industries.

The receipts and expenditures (Table 5) of the sick funds have increased from year to year, in proportion to the increased membership, the figures for 1912 showing an increase over those of 1911. The decrease of receipts and expenditures in 1913 can not be considered on account of the incompleteness of the returns for this year. The annual surplus has greatly varied since 1890 and is closely connected with the rise or fall of the morbidity rate. It has been as low as 2.3 per cent of the contributions, in 1899, and in the two years 1891 and 1894 was as high as 11.4 per cent. In sickness insurance, where the maximum period of benefits is restricted, as in Austria, to 20 weeks, a large reserve is not required, as all expenditures should be met from current receipts. Of the total receipts, contributions formed 93.3 per cent in 1912, and 93.9 per cent in 1913. Insurance benefits were the largest item among the expenditures, forming 85.6 per cent of the total expenditures in 1912 and 86.7 per cent in 1913, or 87.1 and 90.2 per cent, respectively, of the total contributions.

The large increase noted in per capita contributions (Table 6) is offset by a still larger increase in the per capita amount expended for insurance benefits. The per capita costs of administration were 113 per cent higher in 1912 than in 1890.

The total expenditures of funds for benefits have increased regularly since 1890 (Table 7). The pecuniary sick benefit has always been the largest item in this class of expenditure. The expenditures for the services of physicians and for medicines, etc., have shown increases. The expenditures for hospital treatment show a relatively greater increase than the expenditures for any other item, indicating that more extensive use of this type of treatment is being made. The expenses for funeral benefits show relatively the smallest increase of any of the items.

The average expenditures per member for insurance benefits were $2.65 in 1890, and have gradually increased to $4.67 in 1913, an increase of 76 per cent (Table 8). Of the individual items composing these expenditures per member, the payments for sick benefit or pecuniary aid increased during the same period 60 per cent, the cost of medical treatment 106 per cent, the cost of medicines, etc., 64 per cent, the cost of hospital treatment 258 per cent, and the payments for funeral benefit 22 per cent.

The average cost of benefits per day of sickness for all funds combined (Table 9) has increased; also the average costs of benefit per case of sickness and the average cost of funeral benefits.

In 1913 the average cost of benefits per member in all sick funds combined exceeded the average contribution per member by $1.20, or, in other words, the members of sick funds received benefits on an average 35 per cent in excess of their contributions. In the establishment funds the average excess of benefits over contributions was $1.99, or 54 per cent, due to the fact that in this class of funds the employer is by law obligated to bear all the costs of administration.

The operations of the sick funds are shown in the following tables. It must be kept in mind that the term "sickness," as here used, means temporary disability, whether caused by sickness or accident. As stated, the sick funds provide for cases of accident during the first four weeks of disability, and since the official reports do not distinguish between cases of sickness and cases of accident, it is impossible to show these two classes of disability separately, though it is probable that a large part of the cases included in the following tables are accident cases.

TABLE 1.—DISTRIBUTION OF MEMBERSHIP OF SICK FUNDS, BY CLASSES, 1912 AND 1913.

Class of fund and year.	Number of—		Average number of—		Average membership per fund.
	Active funds.	Funds included in the statistics.	Funds.	Members.	
District funds:					
1912	582	582	582	1,592,768	2,737
1913	579	517	517	1,343,336	2,598
Establishment funds:					
1912	1,204	1,197	1,192	797,529	669
1913	1,200	1,117	1,140	782,619	687
Building-trade funds:					
1912	52	54	50	6,542	131
1913	52	12	12	2,079	173
Guild funds:					
1912	1,307	1,295	1,286	630,510	490
1913	1,310	1,250	1,241	596,905	481
Association funds: [1]					
1912	263	258	251	666,765	2,656
1913	271	243	239	658,470	2,755
All sick funds:					
1911	3,379	3,369	3,342	3,603,521	1,078
1912	3,408	3,388	3,361	3,691,114	1,099
1913	3,412	3,160	3,149	3,383,408	1,074

[1] Inclusive of registered aid funds.

TABLE 2.—NUMBER OF COMPENSATED CASES OF SICKNESS AND CHILDBIRTH, DAYS FOR WHICH SICK BENEFITS WERE PAID, AND NUMBER OF COMPENSATED DEATHS IN SICK FUNDS, 1890 TO 1913.

Year.	Compensated cases of sickness and childbirth.		Number of days for which sick benefits were paid.		Deaths compensated.
	Total.	Cases of childbirth.	Total.	Cases of childbirth.	
1890	797,683	26,780	12,409,327	689,889	15,925
1895	1,013,599	41,846	17,516,981	1,124,522	20,094
1900	1,313,148	51,053	22,708,651	1,399,474	23,845
1905	1,527,657	50,096	26,978,071	1,434,982	27,080
1906	1,492,360	54,020	26,433,187	1,502,120	24,858
1907	1,677,838	55,046	29,358,348	1,541,076	26,959
1908	1,811,869	55,511	30,658,569	1,561,412	27,717
1909	1,805,594	55,510	31,043,055	1,527,418	27,820
1910	1,777,514	56,198	30,597,796	1,555,076	27,731
1911	1,932,236	55,171	32,905,047	1,525,174	29,733
1912	1,905,708	56,017	32,885,695	1,555,675	30,304
1913	1,803,411	52,288	31,985,800	1,448,850	27,370

TABLE 3.—RATES AND AVERAGE DURATION OF SICKNESS, AND DEATH RATES IN SICK FUNDS, 1890 TO 1913.

Year.	Cases of sickness per 100 members (exclusive of confinements).	Cases of childbirth per 100 female members.	Average days of duration of a case of sickness (exclusive of confinements).	Average number of days of sickness per member (inclusive of confinements).	Number of deaths per 1,000 members.
1890-1894 (average)	45.7	8.56	16.4	7.98	10.0
1895-1899 (average)	48.2	9.28	17.1	8.69	9.4
1900-1904 (average)	49.5	9.02	17.3	9.11	9.2
1905	51.9	7.91	17.3	9.49	9.5
1906	48.8	8.10	17.3	8.97	8.4
1907	53.8	7.98	17.1	9.64	8.9
1908	54.2	7.60	16.6	9.46	8.6
1909	52.3	7.28	16.9	9.28	8.3
1910	49.6	7.03	16.3	8.82	8.0
1911	52.1	6.58	16.7	9.13	8.3
1912	50.1	6.42	16.9	8.90	8.2
1913	51.8	6.35	17.4	9.45	8.1

TABLE 4.—RATES OF SICKNESS, AVERAGE DURATION OF SICKNESS, AND DEATH RATES, IN SICK FUNDS, BY CLASSES, 1912 AND 1913.

Class of fund and year.	Cases of sickness per 100 members (exclusive of confinements).	Cases of childbirth per 100 female members.	Average days of duration of a case of sickness (exclusive of confinements).	Average number of days of sickness per member (inclusive of confinements).	Number of deaths per 1,000 members.
District funds:					
1912	48.7	6.87	15.9	8.15	7.7
1913	51.2	7.05	16.4	8.82	7.7
Establishment funds:					
1912	67.2	8.35	17.1	12.10	7.9
1913	66.9	8.10	17.9	12.53	7.6
Building funds:					
1912	38.8	.45	14.6	5.67	4.7
1913	36.3	.86	14.3	5.20	6.7
Guild funds:					
1912	35.5	3.46	18.0	6.59	6.9
1913	37.2	3.26	18.0	6.93	6.6
Association funds:					
1912	46.8	6.03	18.4	9.09	11.0
1913	48.1	5.71	18.6	9.39	10.8

TABLE 5.—RECEIPTS AND EXPENDITURES OF THE SICK FUNDS, 1890 TO 1913.

Year.	Receipts.			Expenditures.				Surplus.	
	Contributions.	All other.	Total.	Insurance benefits.	Administration.	All other.	Total.	Amount.	Per cent of contributions.
1890	$4,664,940	$353,017	$5,017,957	$4,099,382	$364,588	$140,273	$4,604,243	$413,714	8.9
1895	6,677,482	445,382	7,122,864	5,784,485	516,838	267,960	6,569,283	553,581	8.3
1900	8,973,412	609,609	9,583,021	8,129,338	727,349	400,113	9,256,800	326,221	3.6
1905	11,447,576	799,008	12,246,584	10,368,022	976,836	491,666	11,836,524	410,060	3.6
1910	16,259,219	1,233,805	17,493,024	13,894,359	1,525,753	764,128	16,184,240	1,308,785	8.0
1911	17,454,842	1,193,438	18,648,280	15,439,899	1,670,154	622,025	17,732,079	916,201	5.2
1912	18,634,415	1,343,019	19,977,435	16,229,564	1,812,297	917,704	18,959,565	1,017,870	5.5
1913	17,496,796	1,342,361	18,839,157	15,787,706	1,655,951	771,802	18,215,460	623,697	3.6

TABLE 6.—AVERAGE RECEIPTS AND EXPENDITURES PER MEMBER OF SICK FUNDS, 1890 TO 1913.

Year.	Receipts per member.				Expenditures per member.			
	Contributions of—		All other receipts.	Total.	Insurance benefits.	Administration.	All other expenses.	Total.
	Members.	Employers.						
1890	$2.10	$0.91	$0.23	$3.24	$2.65	$0.23	$0.09	$2.97
1895	2.26	.97	.22	3.45	2.80	.25	.13	3.18
1900	2.48	1.11	.24	3.83	3.25	.29	.16	3.70
1905	2.76	1.27	.28	4.31	3.65	.34	.17	4.16
1910	3.16	1.52	.36	5.04	4.01	.44	.22	4.67
1911	3.24	1.60	.33	5.17	4.29	.46	.17	4.92
1912	3.30	1.67	.44	5.41	4.39	.49	.25	5.13
1913	3.46	1.71	.40	5.57	4.67	.49	.23	5.38

TABLE 7.—EXPENDITURES FOR INSURANCE BENEFITS BY SICK FUNDS, 1890 TO 1913.

Year.	Pecuniary sick benefits.	Cost of medical attendance.	Cost of medicines, etc.	Cost of hospital treatment.	Funeral benefits.	Total.
1890	$2,494,464	$730,800	$558,047	$180,467	$185,604	$4,099,382
1895	3,450,594	1,044,638	748,258	357,077	183,918	5,784,485
1900	4,833,430	1,443,127	1,088,892	526,176	237,713	8,129,338
1905	6,097,714	1,852,781	1,370,250	765,310	281,967	10,368,022
1910	7,855,705	2,791,964	1,778,055	1,141,311	327,324	13,894,359
1911	8,596,053	3,098,329	2,013,874	1,334,131	397,513	15,439,899
1912	8,858,921	3,361,596	2,119,484	1,478,067	411,496	16,229,564
1913	8,679,047	3,278,223	2,000,652	1,450,631	379,153	15,797,796

TABLE 8.—AVERAGE EXPENDITURES PER MEMBER FOR INSURANCE BENEFITS BY SICK FUNDS, 1890 TO 1913.

Year.	Pecuniary sick benefit.	Cost of medical attendance.	Cost of medicines, etc.	Cost of hospital treatment.	Funeral benefits.	Total.
1890	$1.61	$0.47	$0.36	$0.12	$0.09	$2.65
1895	1.67	.51	.36	.17	.09	2.80
1900	1.93	.58	.44	.21	.09	3.25
1905	2.15	.65	.48	.27	.10	3.65
1910	2.27	.81	.51	.33	.09	4.01
1911	2.39	.86	.56	.37	.11	4.29
1912	2.40	.91	.57	.40	.11	4.39
1913	2.57	.97	.59	.43	.11	4.67

TABLE 9.—AVERAGE COST OF BENEFITS PER CASE OF SICKNESS, PER DAY OF SICKNESS, AND PER DEATH IN SICK FUNDS, BY CLASSES, 1890, 1912, AND 1913.

Class of fund and year.	Average cost of a case of sickness.	Average cost per day of sickness: Pecuniary sick benefits.	Medical attendance.	Medicines, etc.	Hospital treatment.	Total.	Average cost per death.
District funds:							
1890	$4.48	$0.18	$0.07	$0.04	$0.02	$0.31	$6.11
1912	7.56	.25	.10	.06	.05	.46	10.52
1913	7.68	.25	.11	.05	.05	.46	10.51
Establishment funds:							
1890	4.82	.18	.06	.05	.01	.30	8.22
1912	7.83	.25	.09	.08	.02	.45	20.24
1913	8.06	.25	.09	.08	.03	.45	20.09
Building funds:							
1890	6.69	.17	.08	.05	.11	.41	10.04
1912	10.47	.27	.23	.09	.13	.72	8.61
1913	7.17	.22	.12	.08	.08	.50	8.18
Guild funds:							
1890	6.63	.24	.06	.05	.03	.38	10.93
1912	10.80	.32	.12	.07	.08	.59	13.91
1913	10.98	.33	.13	.06	.08	.60	14.74
Association funds:							
1890	5.41	.24	.04	.03	.01	.32	10.38
1912	9.16	.29	.10	.06	.04	.49	12.77
1913	9.52	.31	.10	.06	.04	.51	13.07
All sick funds:							
1890	4.97	.20	.06	.04	.02	.32	8.51
1912	8.30	.27	.10	.07	.04	.48	13.58
1913	8.54	.27	.10	.06	.04	.48	13.85

TABLE 10.—AVERAGE ANNUAL CONTRIBUTION AND AVERAGE COST OF BENEFITS PER MEMBER OF SICK FUNDS, BY CLASSES, 1911, 1912, AND 1913.

Class of fund.	Average annual contribution per member.			Average cost of benefits per member.			Excess per member of benefits over contribution.		
	1911	1912	1913	1911	1912	1913	1911	1912	1913
District funds	$2.96	$3.12	$3.17	$3.75	$3.87	$4.13	$0.79	$0.75	$0.96
Establishment funds	3.48	3.62	3.71	5.46	5.58	5.70	1.99	1.96	1.99
Guild funds	2.94	3.00	3.06	3.96	4.01	4.27	1.02	1.01	1.21
Association funds	3.96	4.06	4.14	4.48	4.59	4.89	.53	.52	.75
All sick funds	3.24	3.30	3.46	4.28	4.39	4.67	1.04	1.10	1.20

INDUSTRIAL PENSIONS.

The tenth annual report of the president and treasurer of the Carnegie Foundation for the Advancement of Teaching[1] contains a section on pensions in which is included a chapter and tabular statement on industrial and institutional pensions. In the text the development of industrial pensions is briefly outlined, with a summary of the plans adopted by several of the large business houses, railroad and street railway companies, and manufacturing plants in the country. With few exceptions the burden of the pension is borne by the employers, and where the employees are required to contribute, the amount assessed ranges from 2 per cent to 3½ per cent of the salary up to $5,000.

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[1] The Carnegie Foundation for the Advancement of Teaching, 576 Fifth Avenue, New York City. Tenth annual report of the president and treasurer, October, 1915. Industrial Pensions, pp. 68–85.

Although the types of pensions here considered are based on the noncontributory principle, their development is of some significance for general pension theory, if only from two points of view. The amount of the pensions granted, if the instances become sufficiently numerous, will serve to establish some normal or standard ratio between pensions and final wages or salary. The second point, allowing for differences in occupational risks, is that a normal age of retirement may become recognized. At present, however, it must be admitted that the age of retirement is fixed somewhat arbitrarily. But there is every prospect that in the course of a number of years there will be a sufficient accumulation of experience in industrial pension development to warrant better and more accurate adjustments. These can be the more readily made in this field because the employers in each case reserve to themselves the right to make such changes in the plans as experience demands.

Thus it is stated that the United States Steel and Carnegie pension fund has availed itself of this provision to revise its pension system. For example, at the end of four years, after an experience with 2,000 pensioners, it has found that the average age of retirement was 65.56 years, while the regulations permitted retirement at 60; and that the retirement took place on an average after 30 years of service instead of 25 years permitted by the regulations. Hence, the age of retirement has been raised from 60 to 65, and the length of service from 25 to 30 years. Continuity of service has been encouraged by the adoption of a regulation providing that such continuity of service will not be considered to have been broken in the case of absence within the following limitations: Six months in the case of leave of absence or suspension, one year in the event of a lay off or reduction of force, and two years in the case of illness or injury.

The tabular statement indicates the lack of uniformity in the pension plans that have been adopted. Fifty-eight corporations are listed, 17 of which are railroad or street railway companies, 9 are banks, and 1 an insurance company. The earliest in point of establishment of those described in the report is the pension system of the American Express Co., inaugurated in 1875. About half (26, or 44.8 per cent) of the plans were started in 1913, 1914, and 1915. Besides the names of the companies and the date of the establishment of the systems, the table shows in each case the method of administration; those included in the benefits; source of funds; retiring allowances, with amount, years of service necessary to merit pension, and age at retirement; disability allowances; refunds; and benefits for dependents. Perhaps the greatest lack of uniformity appears in the amount or method of determining the amount of retiring allowance. Several concerns, however, have adopted the policy of paying 1 per cent of the average or highest annual salary during the last 10 years of service for each year of service, with stated minimum and maximum amounts.

CASUAL LABOR AT THE DOCKS IN GREAT BRITAIN.

"There is casual labor in a great many trades," remarks the author of a recent volume on casual labor at the docks of London,[1] "but in few is it so pervasive and nowhere are the consequences writ so large as in the shipping industry." This condition has prevailed at the London docks in an acute form since the shipping industry assumed considerable proportions, and in the opinion of the author it will continue and grow even more acute unless remedial measures are adopted before the influx of labor after the war. The reasons for this irregularity of employment appear to be the uncertainty attending the coming and going of ships, financial considerations which make it impracticable in large investments for capital to be idle, and "the lack of imagination which, failing to see connections and to trace consequences, does not trouble to seek remedies."

It is the purpose of the little volume under review, which forms one of the publications of the Ratan Tata Foundation of the University of London for the study of methods of preventing and relieving poverty and destitution, to analyze the cause and extent of irregularity of employment of dock labor, and to suggest remedies for the abatement of existing evils. The sources of dock labor and methods of engaging men are described, irregular earnings and their consequences are analyzed, attempts at reform are noted, and suggestions for organizing the hiring and discharging of this class of labor are submitted.

As explaining why the occupation is badly overstocked and "obviously precarious," it is stated that those recruited for dock labor seem largely to be men who have been previously employed but who are victims of industrial misfortune, of bankruptcy, of the death of an industry, or of a season of exceptional depression, while some are boys from "blind-alley" occupations and some are ex-army men. "The crowd of men competing for work morning after morning is the detritus of the industrial world." Since recommendations of character are not usually asked or given, it is easy for anyone to enter the occupation; and personal favoritism with the foreman, by whom men are hired, brings a large number. Sailors who have tired of the sea, being familiar with ships and cargoes, and proverbially handy, are considered good dockers. Large numbers are employed as a result of trade depression, for "room must be found for the ejected of other trades in the occupation which of all occupations has the biggest permanent surplus." This influence also affects the dock laborer in that he suffers the direct consequence of a reduced volume of shipping. Moreover, there appears to be a "positive lure" which brings many recruits, finding expression in the high hourly rate for dock labor and the fact that, as looked upon by a certain class of men, a day off now and then is possible, giving them what they consider a free life. Thus, in both good and bad times men are attracted to the London docks in such numbers that an average daily surplus of at least 10,000 is said to exist.

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[1] Casual Labor at the Docks, by H. A. Mess. G. Bell & Sons, London, 1916. 147 pp.

The method of engaging dock labor seems to be somewhat haphazard and unorganized. Men are taken on at several "calls" during the day—at 7 in the morning, at 7.45, at 8.45, and at 12.45 in the afternoon, with later calls at 5.45 and 10.45. They are hired from stands placed at intervals along the docks, and apparently without adequate intercommunication, an arrangement which seems to occasion loss of time in hiring men, results in the use of the saloon as the clearing house of information, and "increases the surplus of labor necessary to meet fluctuations in demand." The men bitterly complain about the scrambles which frequently occur when calls are made by the foremen; the intervals between early morning calls, it is stated, encourage loafing. By this method of employment the foremen are given excessive power, and suggestions of bribery are reported to nearly every investigator of casual labor. The author describes in some detail the corrupting methods of many foremen.

There appears to be considerable difficulty in obtaining precise information as to the earnings of dock laborers, due to the fact that they are paid at the end of each day, that the amount varies from man to man, and that the pay of each man fluctuates from time to time. However, the record of earnings of a single docker during a 17-year period (1896 to 1912) was secured by the author, who is impressed by the "absolute incalculable nature of the fluctuation." The highest earnings of this docker were in 1897, when his income was £114 7s. 4½d. ($556.58), while his lowest earnings were in 1905, and amounted to £67 1s. 8d. ($326.46). Even greater irregularity is shown in the daily earnings of a dock laborer. "A surprising number of men at the docks do not earn, on an average, 10 shillings [$2.43] a week, and there are many who are fortunate if they get as much as a day a week."

The effect of these low and irregular earnings, in the opinion of the author, is to produce a class of unemployables constantly in need of assistance. It creates a tendency also to produce bad housing, which "is at once an effect of the miserable conditions of his occupation and a potent destroyer of the energy which might lift him out of them." These conditions have apparently not been improved by the dockers' union which was organized as a result of the strike of 1889, because the union seems to have been ineffective in meeting the problem of casual engagement. It has succeeded in raising wages occasionally, but these increases in the rate of pay have served to increase the competition for work. It is noted, however, that an attempt to regularize employment was made in 1891 by the London & India Docks Co., which, at the suggestion of Mr. Charles Booth, initiated the "list" system, embracing the registering of men as "A," permanent men; "B," preference men; and "C," second preference men, who should be engaged in the order named. The system "tended therefore steadily to increase the proportion of men in regular employment, and it paved the way for the creation of a permanent staff."

Another method, the so-called tally system, has been tried in Liverpool. In July, 1912, every longshoreman in Liverpool was registered and given a tally, and it was agreed that for the future no one should be employed without a tally. A joint committee, on which employers and employees were equally represented, was intrusted with the duty of issuing fresh tallies and also of erecting surplus stands at certain intervals along the docks, at which men were to be taken on after the regular morning call (one in Liverpool as against three in London). A further reform was instituted securing the payment of wages through the general clearing-house firms and making it unnecessary for the employee to travel from one firm to another in collecting his weekly wages.

Although these reforms, the author notes, are aimed at concentrating the work in a smaller number of hands with the intention of stopping the influx of newcomers until those already there are getting a reasonable amount of work, yet they have not realized all the hopes of their promoters. Much of the failure has been due to the attitude of the longshoremen themselves, who are responsible for the need of a large surplus of labor, since "very many dockers are content if they can earn 15 shillings [$3.65] a week, and will not take more work if it is offered them."

Additional measures of reform suggested by the author aim either to decrease the sources of supply of dock labor or to regularize the demand. They rest upon the principle "that the burden of finding the balance of a living ought to be transferred from the docker to his employers. If the shipping industry must have men in waiting, then it should pay those men for being in waiting. But as a matter of fact, if employers had to pay for their men's time whether they were actually at work or only in reserve, they would soon find methods of organization which would prevent any considerable wastage of labor." Among other reforms the author suggests making the Liverpool tally scheme compulsory instead of voluntary, thus removing its weak feature; compelling the union to permit dockers to engage in every kind of work necessary at the docks, and thereby preventing too great specialization; dovetailing the seasonal fluctuations in the shipping trade with those in other trades through the system of the labor exchanges; and hiring of extra men through a central body or joint committee of employers and employees or by draft on the labor exchanges for those men whose names appear on their books as seeking employment. For "these men would be casual, but they would not be a casualizing influence."

THE AMERICAN LABOR YEARBOOK, 1916.

The volume which has recently appeared under the above title[1] "represents the first attempt in this country," declares Morris Hillquit in the introduction, "to establish a reliable annual chronicle of the aims, struggles, and achievements of labor throughout the world." Those parts of the book more particularly devoted to international movements are entitled "The international Socialist and labor movements" and "Government and politics." The other four parts of the volume are headed: "The labor movement in the United States," "Labor and the law," "The Socialist movement in the United States," and "Social and economic conditions." The two latter topics comprise 140 pages of the total of 382; 93 pages are given to "The international Socialist and labor movements," 50 pages to "Government and politics," and 47 to "The labor movement in the United States."

Attention is called to some of the special articles: "The American labor movement," by Frank MacDonald; "Teachers' unions," by Benjamin Glassberg; "The Jewish labor movement in the United States," by J. B. Salutsky; "The National Women's Trade Union League of America," by Alice Henry; "The Workers' International Industrial Union," by H. Richter; "The labor secretariat," by S. John Block; "Strikes," by Chester M. Wright; "The 'protocol' in the needle industry," by Morris Hillquit; "Minimum-wage legislation," by Florence Kelley; "Factory inspection," by George M. Price; "Court decisions in 1915," "The Kansas labor statute case and the supreme court," "Academic freedom," "The trend toward public ownership," "Boycott, blacklist, and injunction," and "The Intercollegiate Socialist Society," by Harry W. Laidler; "Report of the work in Congress of Meyer London, Representative of the twelfth New York district," by Laurence Todd; "Work in the Illinois Legislature," i. e., Socialist accomplishments, by Christian M. Madsen; "The work of the Socialist in the New York Assembly," by A. I. Shiplacoff; "Socialist legislation in Pennsylvania," by James H. Maurer; "The Milwaukee municipal administration," by Emil Seidel; "Accomplishments of the Milwaukee administration" and "Facts of public ownership," by Carl D. Thompson; accounts of the foreign language federations affiliated with the Socialist Party, by the different translator-secretaries; "Woman and child labor" and "Infant mortality," by Helen L. Sumner; "Earnings, standard of living, and property income in the United States," by Scott Nearing; "Social insurance" and "Workmen's compensation (progress during 1915)," by I. M. Rubinow; "Industrial accidents in United States," from statement of Royal Meeker, Commissioner United States Bureau of Labor Statistics; "Scientific management and labor," by John P. Frey; "Cooperation in the United States," by C. W. Perky; "Compulsory education laws" and "Vocational education," by Benjamin C. Gruenberg; "The health of school children," by Edward F. Brown; "Federal aid for the common schools" and "Graduated income and inheritance taxation," by William English Walling; "Democratizing the schools," by Randolph S. Bourne; "Community centers in the United States," by John Collier; "Public ownership of public utilities" and "Economic imperialism," by Frederic C. Howe; "Labor and the Democrats," by William L. Stoddard; "The United States Government," by Max S. Schonberg; "The commission form of government," by Felix Grendon; "Proportional representation," by Clarence G. Hoag; "Public employment offices," by William M. Leiserson; "Naturalization," by I. M. Sackin; and "Meaning of the conservation movement," by Gifford Pinchot.

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[1] The American Labor Yearbook, 1916. Prepared by the Department of Labor Research of the Rand School of Social Science. Published by the Rand School of Social Science, New York City [1916]. 382 pp.

Following each article, with few exceptions, there is a brief list of references.

SINGLE TAX IN THE CALIFORNIA CONSTITUTION.

An initiative petition has been perfected providing for the submission to vote at the approaching election of a proposition to incorporate an amendment in the constitution of the State of California which will establish the single tax in that State. The amendment presents an aspect of special interest to labor, in that it makes exceptions from the restriction to the single-tax system by allowing incomes and inheritances to be assessed to provide funds for old-age pensions, mothers' endowments, and workingmen's insurance covering unemployment and injuries. The number of validated signatures (over 88,000) was considerably in excess of the number required by law, while the total number (137,000) was nearly double the legal requirements. The proposed amendment follows:

Article XIII of the constitution is hereby amended to take effect January 1, 1917, by the following section:

The people of the State of California do enact as follows:

Public revenues, State, county, municipal, and district, shall be raised by taxation of land values, exclusive of improvements, and no tax or charge for revenue shall be imposed on any labor product, occupation, business, or person; but this shall not prevent the assessment of incomes and inheritances to provide funds for old-age pensions, mothers' endowments, and workingmen's disemployment and disability insurance.

Landholdings shall be equally assessed, according to their value for use or occupance without regard to any work of man thereon; this value shall be determined in municipalities, and wherever else practicable, by the "Somers system," or other means of exact computation from central locations.

The intent of this provision is to take for public use the rental and site values of land and to reduce landholding to those only who live on or make productive use of it.

Conflicting provisions are hereby repealed.

MANUFACTURES IN THE UNITED STATES, 1914.

A preliminary statement of the general result of the census of manufactures of the United States has recently been issued by the Bureau of the Census, Department of Commerce. Although there have been increases in the various items reported in 1914 as compared with 1909, it should nevertheless be noted that December, 1914, for which the data are shown, was a time of depression, which may account for some of the unusual developments noted.

The census of 1914, like that of 1909 with reference to manufactures, excluded the hand trades, the building trades, and the neighborhood industries, and took account only of establishments conducted under the factory system. In the last census also, as in that for 1909, statistics were not collected for establishments having products for the census year valued at less than $500, except that reports were taken for establishments idle during a portion of the census year, or which began operation during that year, and whose products for such reason were valued at less than $500.

The word "establishment," as used in the census reports, may mean more than one mill or plant, provided they are owned or controlled and operated by a single individual, partnership, corporation, or other owner or operator, and are located in the same town or city.

The reports were taken for the calendar year ending December 31, 1914, wherever the system of bookkeeping permitted figures for that period to be secured, but when the fiscal year of an establishment differed from the calendar year a report was obtained for the operations of that establishment for its fiscal year falling most largely within the calendar year 1914.

PERCENTAGES OF INCREASE.

The population of the United States at the census of 1910 was 91,972,266, and it is estimated that it was 98,781,000 on July 1, 1914.

The summary shows increases at the census of 1914, as compared with that for 1909, for all items except proprietors and firm members, for which a slight decrease is shown.

In the order of their importance, from a percentage standpoint, the increases for the several items rank as follows: Salaries, 37.2 per cent; capital, 23.7 per cent; salaried employees, 22 per cent; primary horsepower, 20.7 per cent; wages, 19 per cent; materials, 18.3 per cent; value of products, 17.3 per cent; value added by manufacture, 15.8 per cent; wage earners, 6.4 per cent; and number of establishments, 2.7 per cent.

A comparative summary for the United States for 1904, 1909, and 1914 follows:

SUMMARY OF THE CENSUS OF MANUFACTURES, 1904, 1909, AND 1914.

Item.	Census—			Per cent of increase in 1914 over—	
	1904	1909	1914	1904	1909
Number of establishments	216,180	268.491	275,793	27.6	2.7
Persons engaged in manufactures:					
Proprietors and firm members	225,673	273.265	264.872	17.4	[1]3.1
Salaried employees	519,556	790,267	964,217	85.6	22.0
Wage earners (average number employed during the year)	5,468,383	6,615.046	7,036.337	28.7	6.4
Total	6,213,612	7,678,578	8,265,426	33.0	7.6
Primary horsepower	13.487,707	18,675,376	22,537,129	67.1	20.7
Capital	$12,675,580,874	$18,428,270,000	$22,790,880,000	79.8	23.7
Services:					
Salaries	$574,439,322	$938.575.000	$1,287.917.000	124.2	37.2
Wages	$2,610,444,953	$3,427,038,000	$4.079,332,000	56.3	19.0
Total	$3,184,884,275	$4,365,613,000	$5,367,249,000	68.5	22.9
Materials	$8,500,207,810	$12,142,791,000	$14,368,089,000	69.0	18.3
Value of products	$14,793,902,563	$20,672,052,000	$24,246,323,000	63.9	17.3
Value added by manufacture (value of products less cost of materials)	$6,293,694,753	$8,529,261,000	$9,878,234,000	57.0	15.8

[1] Decrease.

As to the regularity of employment of wage earners reported by the census of manufactures, it is noted that in 1914 the largest number (7,242,752) was employed in March, and the lowest number (6,640,284) in December, the month of the census; while in 1909 the largest number was employed in November, and in 1904 in October.

The following table shows the number of wage earners engaged in each of the months at the time of the census of 1904, 1909, and 1914, and the per cent of the maximum employed in each month at the same periods:

WAGE EARNERS AT THE CENSUS OF MANUFACTURES, 1914, CLASSIFIED BY MONTHS.

Month.	Wage earners in manufacturing industries.					
	Number.			Per cent of maximum.		
	1904	1909	1914	1904	1909	1914
January	5,262,472	6,210,663	7,075,682	92.7	88.6	97.7
February	5,330,471	6,297,627	7,141,594	93.9	89.9	98.6
March	5,450,736	6,423,517	7,242,752	96.0	91.7	100.0
April	5,493,343	6,437,633	7,217,320	96.8	91.9	99.6
May	5,512,373	6,457,279	7,148,650	97.1	92.2	98.7
June	5,463,804	6,517,469	7,100,368	96.2	93.0	98.0
July	5,323,966	6,486,676	7,018,867	93.8	92.6	96.9
August	5,420,618	6,656,933	7,020,682	95.5	95.0	96.9
September	5,608,412	6,898,765	7,086,801	98.8	98.5	97.8
October	5,676,920	6,997,090	7,006,342	100.0	99.9	96.7
November	5,587,028	7,006,853	6,736,699	98.4	100.0	93.0
December	5,490,453	6,990,652	6,640,284	96.7	99.8	91.7

IMMIGRATION IN AUGUST, 1916.

The number of immigrant aliens admitted into the United States during the first nine months of 1916 has been in excess of the number admitted during the corresponding months of 1915. There has also been an increase from month to month during the first five months of 1916. Compared with the preceding month, June shows a decrease of 0.8 per cent, July of 18.6 per cent, August an increase of 19.7 per cent over July, and September of 21.4 per cent over August. These facts are brought out in the statement following.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913, 1914, 1915, AND 1916.

Month.	1913	1914	1915	1916	
				Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	8.5
February	59,156	46,873	13,873	24,740	43.1
March	96,958	92,621	19,263	27,586	11.5
April	136,371	119,885	24,532	30,560	10.8
May	137,262	107,796	26,069	31,021	15.1
June	176,261	71,728	22,598	30,764	[1] .8
July	138,244	60,377	21,504	25,035	[1] 18.6
August	126,180	37,706	21,949	29,975	19.7
September	136,247	29,143	24,513	36,398	21.4

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during August, 1915 and 1916, was as follows:

IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES, AUGUST, 1915 AND 1916.

Race.	Admitted.		Departed.	
	August, 1915.	August, 1916.	August, 1915.	August, 1916.
African (black)	327	606	139	109
Armenian	72	202	45	39
Bohemian and Moravian	65	25	8	2
Bulgarian, Servian, Montenegrin	301	110	86	10
Chinese	246	145	197	192
Croatian and Slovenian	84	39	4	....
Cuban	493	488	162	144
Dalmatian, Bosnian, Herzegovinian	17	8	....	....
Dutch and Flemish	568	741	98	96
East Indian	6	13	13	2
English	2,925	3,042	963	607
Finnish	362	452	53	47
French	1,050	1,874	289	256
German	931	912	112	53
Greek	2,180	4,767	820	599
Hebrew	1,425	1,344	32	37
Irish	1,701	1,502	218	218
Italian (north)	346	297	472	849
Italian (south)	1,316	3,964	21,636	1,732
Japanese	899	366	90	44
Korean	13	2	5	....
Lithuanian	65	38	13	2
Magyar	88	47	35	9
Mexican	1,098	2,222	45	58
Polish	357	445	86	32
Portuguese	522	1,084	406	129
Roumanian	63	66	25	8
Russian	382	315	727	576
Ruthenian (Russniak)	201	197	....	1
Scandinavian	1,652	2,058	381	381
Scotch	1,069	1,176	290	95
Slovak	22	13	6	5
Spanish	506	765	399	201
Spanish-American	156	208	55	53
Syrian	70	105	18	12
Turkish	11	39	9	2
Welsh	71	66	16	20
West Indian (except Cuban)	78	94	55	37
Other peoples	212	138	78	127
Not specified	....	....	1,207	902
Total	21,949	29,975	29,293	7,686

SEX OF IMMIGRANTS, 1910 TO AUGUST, 1916.

In order to ascertain whether the period of the war has had any appreciable effect upon the sex distribution of immigrants entering the United States or departing, the following table has been compiled:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, BY SEX, 1910 TO 1916.

Year or month.	Immigrant aliens admitted.					Emigrant aliens departing.				
	Number.			Per cent.		Number.			Per cent.	
	Male.	Female.	Total.	Male.	Female.	Male.	Female.	Total.	Male.	Female.
1910	748,056	323,829	1,071,885	69.8	30.2	206,279	54,160	260,439	79.2	20.8
1911	488,230	294,315	782,545	62.4	37.6	290,875	61,548	352,423	82.5	17.5
1912	674,555	351,805	1,026,360	65.7	34.3	244,000	55,385	299,385	81.5	18.5
1913	935,970	451,348	1,387,318	67.5	32.5	219,064	55,145	274,209	79.9	20.1
1914	439,549	248,946	688,495	63.8	36.2	239,110	54,525	293,635	81.4	18.6
1915	153,428	105,250	258,678	59.3	40.7	134,605	26,036	160,641	83.8	16.2
1916:										
January	10,879	6,414	17,293	62.9	37.1	4,674	1,241	5,915	79.0	21.0
February	15,719	9,021	24,740	63.5	36.5	2,859	1,176	4,035	70.9	29.1
March	18,064	9,522	27,586	65.5	34.5	2,379	1,106	3,485	68.3	31.7
April	19,699	10,861	30,560	64.5	35.5	2,832	1,250	4,082	69.4	30.6
May	19,058	11,963	31,021	61.4	38.6	3,439	1,794	5,233	65.7	34.3
June	17,846	12,918	30,764	58.0	42.0	4,068	2,293	6,361	64.0	36.0
July	13,777	11,258	25,035	55.0	45.0	3,446	1,983	5,429	63.5	36.5
August	17,392	12,583	29,975	58.0	42.0	5,570	2,116	7,686	72.5	27.5

OFFICIAL PUBLICATIONS RELATING TO LABOR.

UNITED STATES.

IOWA.—*State Mine Inspectors. Report of the State mine inspectors for the biennial period ending December 31, 1915. Des Moines, 1916. 112 pp.*

This report covers the period of the last half of the calendar year 1914 and of the full calendar year 1915. During the calendar year 1915 the State produced a total of 7,530,088 tons of coal, in the mining of which there were employed on an average 16,369 men. There were in operation 252 mines. During the year there were reported 34 fatal and 245 nonfatal accidents, or an average of 1 fatal accident for each 221,473 tons of coal mined, and 1 nonfatal accident for each 30,735 tons of coal. The fatality rate per 1,000 employed was 2.07 in 1915, 2.1 in 1914, 1.5 in 1913, and 1.8 in 1912.

KENTUCKY.—*Bureau of Labor. Seventh biennial report, 1914 and 1915. Frankfort, 1916. 100. Illustrated.*

Contains the text of the act providing for labor inspectors, the working women's law, the 10-hour law, and the child-labor law as rewritten in March, 1914; notes 33 prosecutions under the child-labor law, 27 of which were dismissed; and gives the experience of certain companies in providing for the welfare of their employees.

MARYLAND.—*State Industrial Accident Commission. Workmen's compensation law of the State of Maryland (as amended by the acts of the General Assembly of Maryland of 1916). Baltimore [1916]. 55 pp.*

Text of the law with footnotes to decisions on claims under the act; contains an index.

MASSACHUSETTS.—*Directors of the Port of Boston. The use and benefits to Massachusetts manufacturers and wage earners of an American merchant marine. Boston, 1915. 14 pp. (Bulletin No. 2.)*

——*Insurance Department. Sixty-first annual report of the insurance commissioner of the Commonwealth of Massachusetts, January 1, 1916. Part 2: Life, miscellaneous, assessment, and fraternal insurance. Boston, 1916. lxxxiii, 303, 368–a, ix pp.*

Among other matter, this volume contains two summary statistical tables of operations under the workmen's compensation act by private and mutual companies, covering operations up to September 30, 1915. Net loss cost per $100 of pay roll is shown. The report also contains the insurance commissioner's statement made before the joint judicial committee of the Massachusetts Legislature May 1, 1916, relative to the proposed changes in rates under the compensation act.

MONTANA.—*Industrial Accident Board. First annual report for the 12 months ending June 30, 1916. [Helena, 1916.] 294 pp.*

Covers first year of operations under the workmen's compensation act, in effect July 1, 1915.

NEW YORK CITY.—*Board of Estimate and Apportionment. Report on market system for New York City and on open markets established in Manhattan, by Marcus M. Marks, president of the Borough of Manhattan, and chairman committee on markets, Board of Estimate and Apportionment. [New York, 1916.] 121 pp.*

The committee on markets was appointed by the Board of Estimate and Apportionment early in January, 1914, in order to develop a plan of market organization for the city with a view to reducing the cost of living. A large share of the report contains descriptive accounts of the markets in the larger cities of Great Britain, France, and Germany.

NEW YORK.—*State Education Department. Division of agricultural and industrial education. Citizenship syllabus: A course of study and syllabus in civic training and naturalization for adult immigrants in evening schools. Reprinted from the twelfth annual report of the State Department of Education. Albany, 1916. 45 pp. (University of the State of New York Bulletin, September 1, 1916.)*

——— ——— ——— *Safety first for vocational schools, prepared by Lewis A. Wilson, specialist in industrial schools. Albany, 1916. 89 pp. illus. (University of the State of New York Bulletin, August 15, 1916.)*

It is stated in the introduction that "this bulletin has been prepared to help school boards and vocational teachers safeguard the vocational schools and to furnish suggestive material for safety-first courses in our day and evening vocational schools. * * * The material selected has been proved by the 'acid test' of experience to be practical and effective. * * * The day and evening vocational teachers can render a great service to the State by instructing the pupils enrolled in these schools in the general principles of safety. It is a cause worthy of the cooperation of every teacher interested in the humanitarian, economic, or social problems of the day. It is a problem so big and vital that only by the cooperation of all agencies—the schools, the home, the church, the employer, and the employee—will it be possible to reduce to a minimum the preventable loss that is expressed in terms of thousands killed, millions of men and women injured, and millions of dollars wasted annually."

——— *State Industrial Commission. Rule 4: Specifications of fire escapes accepted as required means of exit. Albany. [1916, 4 pp.] (Bulletin 13, Industrial Code.)*

OHIO.—*Industrial Commission. Department of workshops and factories. Standards for safety and sanitation relating to foundries and the employment of women in core rooms. Columus, 1916. 12 pp.*

UNITED STATES.—*Board of Mediation and Conciliation. Railroad labor arbitrations: Report of the United States Board of Mediation and Conciliation on the effects of arbitration proceedings upon rates of pay and working conditions of railroad employees. Prepared under the direction of the board by W. Jett Lauck. Washington, 1916. 608 pp. (64th Cong., 1st sess., Senate Doc. No. 493.)*

A review of the above appeared in the October, 1916, issue of the MONTHLY REVIEW (pp. 20 to 23).

UNITED STATES.—*Commission on Industrial Relations. Industrial Relations: Final report and testimony submitted to Congress by the Commission on Industrial Relations created by the act of August 23, 1912. Washington, 1916. 11 vols. (64th Cong., 1st sess., Senate Doc. No. 415.)*

Special authorization was made by Congress on April 28, 1916, for the printing of the testimony before this commission. The final report of the majority and minority members of the commission and special reports for individual commissioners had also been previously published separately by the commission before its going out of existence. A review of this final report may be consulted in the MONTHLY REVIEW of November, 1915, pages 48–76, 91.

Of the 11 volumes in which this testimony will be printed 5 have thus far appeared. The testimony before the commission is published chronologically under cities. Each volume has a separate table of contents, with the names of the witnesses under each topic dealt with. The final volume will contain a consolidated index of witnesses and of positions or titles of witnesses, with cross references.

—— *Congress. House. Committee on Interstate and Foreign Commerce. Safety of employees and travelers on railroads: Report to accompany H. R. 16681. Washington [1916]. 11 pp. (64th Cong., 1st sess., House of Representatives, Rept. No. 979.)*

A report favorable to the passage of a bill, with amendments submitted, requiring common carriers engaged in interstate commerce by railroad to afford a safe clearance between structures located on their roadways and locomotives and cars passing over their lines, to require such carriers to equip their passenger cars with cinder deflectors, and for other purposes. "The employees are asking for the bill in the form recommended by the committee. * * * The passage of this bill, we believe, will not only save the lives and prevent the suffering of employees, but it will also result in a saving in dollars and cents both to the employees and to the railroad company."

—— —— *Committee on the Judiciary. Limiting activity of certain officers and employees of the Government. Hearing before the Committee on the Judiciary, House of Representatives, Sixty-fourth Congress, first session, on H. R. 9820. Serial 32: Parts 1 and 2, supplement. April 25 and 26, 1916. Wahington, 1916. pp. 59–63.*

Statements of George P. Foster, manager of La Moderna Poesia, of Habana, Cuba, in connection with his employment of plate printers from the United States Bureau of Engraving and Printing to assist in work in Cuba, to prohibit which practice legislation was proposed at the recent session of Congress.

—— —— *Committee on Labor. Commission to study social insurance and unemployment; report to accompany H. J. Res. 250. Washington [1916]. 3 pp. (64th Cong., 1st sess., House of Representatives, Rept. No. 914.)*

A report favorable to the passage of a House joint resolution for the appointment of a commission to study social insurance and unemployment, and appropriating $50,000 therefor. "It is primarily a commission to study a subject which has engrossed the attention of a majority of the civilized nations of the world during the last 30 years."

—— —— *Committee on Labor. National colonization bill. Hearings before the Committee on Labor, House of Representatives, Sixty-fourth Congress, first session, on H. R. 11329, a bill to authorize the Secretary of Labor to cooperate with other departments of the Government in fostering, promoting and developing the welfare of the wage earners of the United States by creating new opportunities for permanent and profitable employment, and for other purposes. May 18, 22, 25, June 5 and 15, 1916. 125 pp.*

The bill in question was introduced by Mr. Crosser, of Ohio, for the purpose indicated in the title. The promoter of the bill called attention to the connection between the purposes to be accomplished by this bill, and the recommendations contained in the annual report of the Secretary of Labor for the fiscal year 1915, the object being to make available certain sections of the public domain for that class of wage earners for whom jobs can not at any time be found or who may desire larger opportunities for engaging in agriculture and thereby assisting in the development of the natural resources of the country.

Among the materials published with these hearings are a series of exhibits supplied by the Bureau of Labor Statistics on home colonization as practiced in certain foreign countries: Australia, New Zealand, Brazil, Colombia, Peru, Uruguay, Germany, Russia (Siberia), Finland, Spain, and the Scandinavian countries; also a statement of the distribution of homes according to proprietorship and encumbrances in cities having in 1910, 100,000 inhabitants or more; statement as to tendency in ownership of farms in the United States; a discussion of tenants in the United States; and a statement of the distribution of the public lands in the United States.

—— —— —— *Subcommittee No. 8 of the Committee on the Post Office and Post Roads. Indefinite leaves of absence to superannuated employees of the Postal Service. Hearings before Subcommittee No. 8 of the Committee on the Post Office and Post Roads, House of Representatives, on H. R. 695. April 7 and 8, 1916. Washington, 1916. 118 pp.*

Hearings on a bill providing for what is practically a pension scheme, permitting the indefinite retirement of certain superannuated employees of the Postal Service on an allowance of $600 per annum.

—— —— —— *Subcommittee No. 14 of the Committee on the Post Office and Post Roads. Retirement of postal employees. Hearings before Subcommittee No. 14 of the Committee on the Post Office and Post Roads, House of Representatives, on H. R. 10130. April 12, 1916. Washington, 1916. 67 pp.*

Hearings on a bill to retire postal employees after 25 years' service on an annuity equivalent to one-half their average annual salary for the past five years, but not to exceed $600.

—— —— *Senate. Committee on Interstate Commerce. Hearing before the Committee on Interstate Commerce, Sixty-fourth Congress, first session, on proposed bills in connection with legislation relative to the threatened strike of railroad employees. (Tentative print only.) Washington, 1916. 157 pp.*

—— *Department of the Interior (Bureau of Mines). Abstract of current decisions on mines and mining, reported from January to April, 1916, by J. W. Thompson. Washington, 1916. xi, 90 pp.*

This bulletin is the seventh of its kind published by the Bureau of Mines. The volume consists of a digest of decisions of Federal and State courts of last resort on questions relating to the mining industry, including ownership and possession, sale, eminent domain, definitions of mining terms, corporate actions, claims, patents, liens, taxation of mining property, and statutes relating to mining operations, involving the responsibility of the operator to the employee in maintaining healthful and safe conditions of work, comparative negligence, etc.

—— *Superintendent of Documents. Price list 33. Labor: Publications relating to child labor, women wage earners, cost of living, employers' liability, hours of labor, industrial arbitrations, and strikes. For sale by the Superintendent of Documents. Washington, 1916. 32 pp.*

FOREIGN COUNTRIES.

AUSTRIA.—*Amtliche Nachrichten des k. k. Ministeriums des Innern, betreffend die Unfall- und Krankenversicherung der Arbeiter. Vienna. July and August, 1916.*

Current reports relating to the social insurance system in Austria.

BRAZIL.—*Boletim do Ministerio da Agricultura, Industria e Commercio. Rio de Janeiro. July to December, 1916 (vol. 4, No. 3).*

CANADA.—*Commission of Conservation. Civic Improvement League. Report of the conference held in cooperation with the Commission of Conservation, Ottawa, January 20, 1916. 73 pp.*

Contains addresses of welcome; a paper outlining the present scope for practical work in improving civic conditions; discussions by delegates on municipal government, municipal finance, and unemployment; a paper on civic problems in Ontario; a further discussion on town planning, housing, and public health; and immigration and civic development after the war.

—— *Department of Labor. Fifth annual report on labor organization in Canada for the calendar year 1915. Ottawa, 1916. 232 pp.*

The serious effect of the war in Europe on the activities and general conditions of trade-unionism in Canada is the most striking feature of the information presented in the present volume covering the calendar year 1915. The preceding report (1914) showed a loss in trade-union membership estimated at 9,636, while 14 trade-union branches or units became extinct. The present report shows a further decrease of 120 units and a membership loss estimated at 22,820, the membership figures falling from 166,163 at the close of 1914 to 143,343 at the end of 1915. The report attributes this decline in the first place to the fact that trade-unions have contributed a substantial quota (approximately 12,500 men) to the over-seas forces. Another movement which has taken from Canada during the past year a considerable number of workmen, and in all probability a corresponding proportion of trade-union members, is the employment of Canadian workmen in munitions concerns in Great Britain. A large part of the membership decline must, however, be charged to the economic depression which in the case of certain industries has now been continuous for several years.

The volume contains an account of trade-union developments in Canada during 1915 and treats of such topics as the war and trade-unionism, some incidents of organized labor during 1915, international trade-union organizations, building-trades organizations, organizations other than international, trades and labor congress of Canada, federation of trade-unions, district councils, railroad brotherhood committees, trades and labor councils, trade-union local units, business agents, trade-unionism in Canada, trade-union beneficiary work, changes in labor bodies during 1915, the labor press, and conventions to be held in 1916.

Of the total membership of Canadian trade-unions, 114,722 members were affiliated with international organizations, a decrease of 25,760 from the figures for 1914. The total disbursements for trade-union benefits for 1915 by the various international organizations amounted to $14,565,365, an increase of $1,727,378, as compared with the amount reported for 1914. Of the total expenditures for benefits the largest portion ($7,628,676) was disbursed for death benefits and the next largest portion ($3,208,604) for strike benefits.

—— —— *Sixth annual report on wholesale prices, Canada, 1915. Ottawa, 1916. xv [1], 312 pp.*

This review of wholesale prices in Canada remarks that "the rise in prices in 1915 brought the general level of wholesale prices in Canada much above any point previously indicated since 1890 by the department's index number, which includes 272 articles, and possibly higher than at any time during the past century, though prices were very high at times between 1850 and 1872 during the Crimean War, the American Civil War, and the Franco-Prussian War" (p. 1). Thus, compared with the level of prices prevailing during the period 1890–1899, prices in 1915 were 48 per cent higher.

"The rise in price of staples, and of food especially, was greatest where conditions were most affected by war." In general, the effect of the war is characterized by the department in the following paragraph:

"Owing, therefore, to the predominating influence of war conditions on all lines of industry and trade, crop conditions had less effect than usual on trade and prices. The short world crop in 1914 was only of secondary importance in raising prices of cereals and again the large crops of 1915 did not reduce prices to anything like normal levels. The war demand for materials more than made up for any reductions in demand which would have been felt as a result of short crops in 1914 just as the great capital expenditure in 1912 made up for the reduced purchasing power due to the short and damaged crops in 1911. Such immediate results, however, are usually offset to a great extent before long by reaction inevitable after such an artificial stimulus, as was experienced (although the effect in lowering prices was only beginning to be felt when war broke out) in Canada in 1913–14, and will again appear when the demand for war supplies abates and the readjustment necessary after such expansion of credit and expenditure of capital tests the industrial structure (with considerable liquidation) and makes certain a sound basis before further progress is possible."

As a full account of this Canadian index number of wholesale prices has been published in Bulletin 173 of this bureau, there is presented merely the following table by way of summary of the movement of wholesale prices from 1906 to 1915, inclusive:

INDEX NUMBERS OF WHOLESALE PRICES IN CANADA OF ALL COMMODITIES, BY GROUPS, 1906 TO 1915.

[Source: Canada Department of Labor. Wholesale prices, Canada, 1914, p. 4.]

[Average prices 1890-1899=100.]

Class of commodities.	Year.									
	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
1. Grains and fodder	118.5	140.2	148.3	149.9	140.7	148.4	167.3	136.8	156.5	186.9
2. Animals and meats	130.1	133.8	129.6	148.6	163.6	146.6	160.8	180.8	192.3	187.2
3. Dairy produce	120.2	131.5	136.3	133.6	135.7	136.2	159.0	154.7	154.4	161.4
4. Fish	121.8	129.5	120.5	134.0	145.1	143.6	155.7	158.0	156.0	149.7
5. Other foods	103.1	112.5	110.3	107.6	111.3	118.7	126.0	117.4	118.8	125.5
6. Textiles	123.4	126.1	111.0	108.3	114.6	119.2	120.7	130.8	133.5	149.2
7. Hides, leather, boots	128.1	125.5	120.0	135.4	135.4	139.6	152.4	163.9	171.8	180.5
8. Metals and implements:										
(a) Metals	128.6	134.8	106.3	101.9	97.6	108.3	117.4	119.1	113.9	152.4
(b) Implements	106.0	107.1	104.2	102.4	104.5	104.5	104.7	105.6	106.8	112.1
9. Fuel	106.4	108.8	102.2	103.8	103.0	100.5	113.3	118.2	110.9	108.8
10. Building materials:										
(a) Lumber	152.7	165.2	162.6	154.6	158.5	165.4	166.5	181.3	182.1	175.7
(b) Miscellaneous	104.7	108.7	107.5	105.7	109.2	102.6	105.4	112.7	111.4	115.9
(c) Paints, oils, glass	135.3	141.2	136.8	135.2	145.5	154.5	148.6	144.8	140.7	157.1
11. House furnishings	113.0	112.7	112.8	110.4	110.6	110.4	114.5	126.2	129.5	136.5
12. Drugs and chemicals	106.3	108.5	107.1	103.9	109.5	112.1	115.5	113.3	121.6	181.3
13. Miscellaneous:										
(a) Furs	229.2	239.4	231.8	227.2	234.5	252.9	297.3	307.9	205.4	161.9
(b) Liquors, tobaccos	108.1	125.5	118.0	117.5	132.9	151.2	155.2	134.7	136.9	135.6
(c) Sundry	120.9	123.0	117.6	121.6	118.0	110.3	104.3	113.1	108.5	116.6
Total	120.0	126.2	120.8	121.2	124.2	127.4	134.4	135.5	136.1	148.0

CANADA.—*Department of Labor. The Labor Gazette, Ottawa. 1916.*

Contains the usual current material on industrial conditions, proceedings under the Industrial Disputes Act, trade disputes, reports from employment bureaus, immigration, wholesale and retail prices, fair-wages schedules in Government contracts, collective agreements, industrial accidents, and court decisions affecting labor. There is a special article on Government control of munition-making establishments in the United Kingdom.

—— (PROVINCE OF BRITISH COLUMBIA).—*An act to provide compensation to workmen for injuries sustained and industrial diseases contracted in the course of their employment. Victoria, 1916. 30 pp.*

This is the text of the workmen's compensation act passed by the legislative assembly of the Province of British Columbia on May 31, 1916.

—— (PROVINCE OF SASKATCHEWAN).—*Department of Agriculture (Bureau of Labor). Fifth annual report of the bureau of labor of the Department of Agriculture of the Province of Saskatchewan for the 16 months ended April 30, 1916. Regina, 1916. 30 pp.*

This report relates mainly to the development of industry in Saskatchewan. Among other topics are included: Coal-mines inspection, factory inspection, employment-agency inspection, industrial accidents, immigration, farm labor, Government fair wages, industrial disputes, labor legislation, building-trades wages, statistics of local trade-unions.

Industrial accidents are declared to show "a gratifying decrease when compared with the record for 1914," a decrease due, however, to the depression of trade conditions. Accidents are shown merely as fatal and nonfatal, 13 of the former and 334 of the latter having occurred in 1915, as compared, respectively, with 14 and 457 in 1914. These accidents are further classified by the month, day, or week, hour or day of their occurrence, age and length of experience of persons injured, and number of hours worked per week.

Immigration to the Province declined from 44,543 in 1913 to 20,634 in 1914 and to 5,812 in 1915.

The report shows that in 1912 14 strikes occurred, affecting 226 firms and 1,930 employees; in 1913, 5 strikes, affecting 32 firms and 243 employees; in 1914, 2 strikes, affecting 5 firms and 78 employees; and in 1915, 2 strikes, affecting 9 firms and 88 employees.

In the matter of legislation it is noted that the legislature refused to enact a law making the insurance of employers under the workmen's compensation act compulsory. It is remarked, however, by the secretary of the bureau that "the coming of State insurance is apparently inevitable," and an effort will undoubtedly be made before the next session to secure definite information, as a large volume of statistics is absolutely necesstry before the advisability of such a scheme for Saskatchewan can be decided upon.

The war is said to have caused considerable decrease of membership of trade-unions for the year 1915. There are enumerated 91 unions in the Province, with an estimated membership of 3,505.

CHILE.—*Ministerio de Ferrocarriles. Proyecto de creacion de una caja de retiros y de previsión para el personal de las empresas de los ferrocarriles del Estado. Santiago de Chile, 1916. 206, [1] pp.*

This report and draft of law proposes the establishment of a retirement and old-age pension fund for the employees of the State railways. A study is made of the probable cost of such a system on the basis of actuarial investigations and analogous legislation and practice in other countries.

DENMARK.—*Arbejdsløshedsinspektør. Anerkendte arbejdsløshedskasser: En Haandbog til brug for kassernes ledelser. Copenhagen, 1916. 176 pp.*

This is a convenient handbook compiled by the office of the chief unemployment inspector under the unemployment subsidy law of Denmark of April 8, 1914. It is meant for the use of the directors of unemployment funds which come within the provisions of the law for the receipt of a State subsidy for the relief of unemployment. It explains in simple form and by concrete illustrations the intent of the different provisions of the law, how the funds shall conduct their business to comply with it, etc.

—— *Statistiske Efterretninger udgivet af det Statistiske Department. Copenhagen. September 7, 1916 (vol. 8, No. 14).*

Contains statement of retail prices in August, 1916, and unemployment in May, 1916.

GERMANY.—*Amtliche Nachrichten des Reichsversicherungsamts. Berlin, August, 1916.*

Current reports on the operation of the German social insurance system.

GREAT BRITAIN.—*Birmingham. Health Department. Report of the medical officer of health for the year 1915. Birmingham, 1916. 72 pp.*

This volume, in addition to reports bearing directly upon health and sanitary conditions in the city of Birmingham, contains data on housing and town planning and inspections under the factory and workshops act, and also statistics on infant mortality.

—— *Home Department. Factory and workshop orders. (1916 edition.) London, 1916. [8] 224 pp.*

This volume contains the statutory orders relating to factories and workshops and other establishments subject to inspection under the factory and workshop acts, 1901 to 1911, which were in force on January 1, 1916. Since the last edition of January, 1914, it is noted that two new orders have been added to the volume, first, an order making toxic jaundice a notifiable disease; and second, an order governing the construction and repair of ships in shipbuilding yards. Toxic jaundice is a disease which has come into prominence in the munition industry; it is due to tetrachlorethane or nitro or amido derivatives of benzene or other poisonous substance.

It may be noted perhaps that the statutory rules and orders contained in this volume are in the nature of supplementary legislation, power to make which is delegated to the home department for the purpose of enforcement of the factory acts. It contains regulations as to special exceptions permitted in regard to hours of labor and holidays, overtime, employment of women and young persons, details for the safety and hygiene of workers in dangerous and unhealthful industries, enumeration of particular establishments and processes subject to the rules and regulations of the factory laws, and determination of standards and definition of terms relating to the employment and education of children.

—— *Local Government Board. Alkali, etc., Works Regulation Act, 1906; fifty-second annual report on alkali, etc., works, by the chief inspector: Proceedings during the year 1915. London, 1916. 100 pp.*

Covers inspection of chemical works for which special regulation is required by reason of the dangerous processes involved in them.

The number of registered works in England, Ireland, and Wales was 1,372.

GREAT BRITAIN.—*London County Council. Public Education Committee. Report of the county medical officer of health and school medical officer for the year 1915. London, 1916. 40 pp.*

Contains the usual administrative report on the health of the county of London. A special report on anthrax in London has been reproduced on page 108 in this number of the REVIEW.

——*National Health Insurance Commission. Reports of decisions on appeals and applications under section 67 of the national insurance act, 1911, and section 27 of the national insurance act, 1913. Part III. London, 1916. 190 pp.*

Decisions by the commission in the matter of disputed claims for sickness, compensation, etc., under the act.

—— *Registrar General. Seventy-seventh annual report of births, deaths, and marriages in England and Wales, 1914. London, 1916. lxi, 582 pp.*

This is a review of vital statistics of the year 1914, and includes the final report on the census of 1911, which shows the total population of England and Wales as of April 3, 1911, to be 36,070,492. The salient features of vital statistics of 1914 are thus summarized in the report: "The marriage rate was 15.9 per 1,000, being * * * 0.5 above the average in the 10 years 1904 to 1913; * * * the birth rate in 1914 was 23.8 per 1,000, and was 2.1 below the average for the preceding decennium; * * * the death rate in 1914 was 14 per 1,000, and was 0.7 below the average for the 10 preceding years. * * * Infant mortality was 105 per 1,000 births, being 14 per 1,000 below the average for the preceding decennium. * * * Cancer caused a higher death rate than in any preceding year, owing to increased mortality among males, and the rates from phthisis and from tuberculosis as a whole, although well below the average, showed a slight increase upon those in the preceding year. The mortality from diseases affecting the lungs was low, but somewhat above that in 1913."

—— *Statutory rules and orders other than those of a local, personal, or temporary character. Issued in the year 1915 in 3 volumes. Volume II comprising the title "National Health Insurance," and also table showing effect of legislation, and index to Volume II. London, 1916. 568 pp.*

These statutory rules and orders are in the nature of supplementary legislation necessary for the complete enforcement of the national health insurance act, 1911, and are issued by the health insurance commissioner. They relate to matters of definition under the act, contributions, organization of medical care and treatment, organization of recognized societies who are the carriers of the health insurance, and other matters in relation to the application of the health insurance act.

—— *Treasury Department. Report on findings of the select committee on post-office servants. Second report. London, 1916. 8 pp.*

This report relates to the internal administration and organization of a post-office staff, methods of wage payment, promotions, allowances, etc.

ITALY.—*Bollettino dell' Ufficio del Lavoro, Ministero per l' Industria, il Commercio e il Lavoro. Rome, August 16 and September 1, 1916. (Semimonthly.)*

Current reports on the labor market, labor disputes, employers' and workmen's organizations, retail prices, labor legislation, court decisions affecting labor; also several short articles on industrial hygiene.

NETHERLANDS.—*Centraal Bureau voor de Statistiek. Verslag over het jaar 1915. The Hague [1916]. 32 pp.*

This publication constitutes the administrative report of the Dutch statistical office and describes the progress of its work during the current year 1915. Among other statistics it compiles and publishes statistics relating to labor conditions, strikes and lockouts, prices, both wholesale and retail, labor exchanges, wages and hours of labor, and other special matters of that kind. The bureau, in addition to its reports of special investigations, publishes a yearbook and a monthly periodical.

NETHERLANDS.—*Centrale Commissie voor de Statistiek. Verslag over het jaar 1915. The Hague* [*1916*]. *72 pp.*

This publication is the administratve report of the advisory commission on statistics, created by a royal decree January 9, 1899 (Statsblad, 1899, No. 43). The purpose of the commission is to advise the bureau of statistics, to prepare and suggest subjects for investigation, and to issue orders in connection therewith.

—— *Maandschrift van het Centraal Bureau voor de Statistiek. The Hague, August, 1916.* (*Vol. 11, No. 8.*)

Contains the usual data on the state of the labor market, unemployment and unemployment insurance, employment exchanges, strikes and lockouts, organization of employers and employees, wholesale and retail prices; also an account of the progress of labor legislation through parliament and a review of labor conditions in foreign countries.

—— *Departement van Landbouw, Nijverheid en Handel. Centraal verslag der arbeidsinspectie in het Koninkrijk der Nederlanden over 1914.* [*The Hague*], *1916. xxxvii, 473, xiii pp.*

This report of the factory inspection department of the Netherlands covers inspections under the law on health and safety of employees, the general labor law, the law on noxious or injurious trades, the law for the protection of stonecutters, the phosphorus-matches law, the accident law, and the law for the protection of caisson workers. Special chapters are concerned with accidents and industrial diseases. The report closes with a summary of labor conditions in the different industries as of January 1, 1915.

The inspection service of the Netherlands covers 72,240 factories and workshops, and of the number employed in them the law protects 192,421 workers, while 398,523 are left unprotected by any legislation. During the year 1914 the inspectors visited 22,868 factories and workshops, which employed 100,620 so-called protected persons and 202,657 unprotected persons. In the course of inspection 31,156 visits were made.

NEW SOUTH WALES.—*Department of Labor and Industry. Industrial Gazette. Sydney. July, 1916.* (*Vol. 10, No. 3.*)

Current reports on the labor situation, labor legislation, wages boards, arbitration awards, factory inspection, labor exchanges, and prices and cost of living. Labor exchange supplement No. 16.

NEW ZEALAND.—*Court of Arbitration. Decisions under the workers' compensation act, filed for the year 1914, issued under the direction of the minister of labor. Vol. 13. Wellington, 1915. 56 pp.*

—— *Journal of the Department of Labor. Wellington, August, 1916.*

Contains current data on the labor market, employment offices, retail prices, cost of living, trade-union statistics, and legal decisions affecting labor.

—— *Registrar of Friendly Societies. Friendly societies and trade-unions: Thirty-ninth annual report by the registrar of friendly societies for the year ended 31st December, 1915.* [*Wellington, 1916.*] *37 pp.*

Friendly societies as referred to in this report and in British parlance in general are quite analogous to the fraternal lodges in this country. According to this report there were registered in New Zealand 917 local societies on December 31, 1915. Tabulated returns from 728 lodges show a membership of 73,027, whose total assets amounted to £1,852,355 ($9,014,486). There were 32 trade-unions on the register at the end of the year 1915.

QUEENSLAND.—*Department of Labor. The Queensland Industrial Gazette. Brisbane. August 10, 1916.* (*Vol. 1, No. 6.*)

Contains current monthly reports on the labor market, employment offices, retail prices, industrial arbitration, decisions, trade agreements, factory accidents, etc.

SOUTH AFRICA.—*Department of Mines. Miners' phthisis prevention committee. General report of miners' phthisis committee. Pretoria, 1916. 206 pp. illus., pl., diag.*

Report of a committee to inquire into methods for the prevention of miners' phthisis in the Witwatersrand gold mine. A preliminary report was presented August 1, 1912; an interim report June 13, 1913; and a special report July 28, 1915. In addition to these reports various memoranda have also been issued by the committee. The report above listed is the general report covering all the work of the committee and including the subject matter dealt with in the reports and memoranda referred to. A summary will appear in a future number of the REVIEW.

SOUTH AUSTRALIA.—*Statistical Department. Summary returns of manufactories and works for the year 1915 and the period 1910–1915, and report thereon. Adelaide* [*916*]. *8 pp.* (*Bulletin No. 4 of 1916.*)

SPAIN.—*Boletín del Instituto de Reformas Sociales. Madrid. August, 1916.*

Current administrative reports of the department—strikes, labor legislation, court decisions, and reports of trade-union congresses.

SWEDEN.—*Socialstyrelsen. Underdånigt utlåtande med förslag till lag om vissa åtgärder till främjande av arbetsfred. Stockholm, 1916. 63 pp.*

Reviewed on page 64, in this number of the REVIEW.

RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *Annals. Vol. LXVII, Whole No. 156, September, 1916. New possibilities in education.*

Contains articles on vocational education and guidance, manual labor and national ideals, continuation schools.

AMERICAN FEDERATION OF LABOR. ILLINOIS BRANCH. *Constitution of the Illinois State Federation of Labor, adopted by the 33d annual convention, Oct. 18–22, 1915. 30 pp.*

—— —— *Proceedings of the 33d annual convention of the Illinois State Federation of Labor, Alton, Oct. 18–22, 1916. 343 pp.*

—— KENTUCKY BRANCH. *Book of laws and proceedings of the Kentucky State Federation of Labor, Louisville, Jan. 10–12, 1916. 63 pp.*

—— NEW JERSEY BRANCH. *Proceedings of the 37th annual convention of the New Jersey State Federation of Labor, Jersey City, Aug. 16–18, 1915. 52 pp.*

—— PENNSYLVANIA BRANCH. *Proceedings of the 15th annual convention of the Pennsylvania Federation of Labor, Beaver Falls, May 9–12, 1916. 128 pp.*

—— VIRGINIA BRANCH. *Proceedings of the 21st annual session of the Virginia Federation of Labor, Bristol, June 5–7, 1916.* (*In Union News, vol. 4, No. 23, June 5, 1916, Supplement, pp. 43–69.*)

—— WEST VIRGINIA BRANCH. *Constitution and rules of order of the West Virginia State Federation of Labor, revised at 9th annual convention, Huntington, May 8–11, 1916. 16 pp.*

American Federation of Labor. West Virginia branch.—*Proceedings of the 9th annual convention of the West Virginia State Federation of Labor, Huntington, May 8–11, 1916. 127 pp.*

—— **Wisconsin branch.** *Labor conditions in Wisconsin. Third report by the executive board of the Wisconsin State Federation of Labor, Milwaukee, July 1, 1915. 17 pp., 10 statistical tables.*

This report shows the number of unions and their membership as reported for the principal cities and industries, weekly wages of members, hours of labor, changes in hours and wages, rates for overtime and Sunday work, unemployment, trade agreements, and monthly rents as compared with annual earnings. Details are given for 1914, with comparative figures for 1913.

—— **Wisconsin branch.** *Proceedings of the twenty-fourth annual convention of the Wisconsin State Federation of Labor, Fond du Lac, July 19–22, 1916. 140 pp.*

American Foundrymen's Association. *Proceedings of the twentieth annual meeting, Atlantic City, N. J., Sept. 27 to October 1, 1915. Published by the American Foundrymen's Association, Cleveland, Ohio, 1915. 672 pp.*

Besides a number of technical papers relating to foundry work and processes, contains papers on scientific management, relation of foreman to employer, goggles for chippers and other operatives, safety and sanitation, and industrial education.

American Labor Year Book for 1916. *Published by the Rand School of Social Science, New York, 1916. 382 pp. Price, 50 cents.* See p. 134.

Barker, C. Helene. *Wanted, a young woman to do housework. New York, Moffat, Yard & Co., 1915. 127 pp. Price, $1 net.*

A discussion of the servant problem. Treats of the "present unsatisfactory condition of domestic labor" and advocates limiting housework to eight hours a day six days a week, the observance of legal holidays, extra pay for overtime, and that servants live outside place of employment. Eight-hour schedules for one, two, and three employees are given.

Carnegie Foundation for the Advancement of Teaching. *Bulletin No. 9. A comprehensive plan of insurance and annuities for college teachers, by Henry S. Pritchett, president of the Carnegie Foundation. 1916. 67 pp.*

—— *Tenth annual report, 1915. 133 pp.*

Part III of this report (pp. 49–100) contains brief articles on the development of pension systems for teachers, industrial workers, university professors, and clergy. (See p. 129 for review of section relating to industrial pensions.)

Carter, W. S. *Why the eight-hour day is right. Supplement to the Labor World, July 21, 1916. Transportation Brotherhood Publicity Bureau, 1311 American Trust Building, Cleveland, Ohio. 12 pp.*

An article by the president of the Brotherhood of Locomotive Firemen and Enginemen, aiming to show how safety is menaced by fatigue, the operation of the 16-hour law, that occupational hazard is greater in the railroad-train service than in any other industry, and that arbitration is an unsatisfactory method of settlement.

Consumers' League of Cincinnati (Ohio) (*30 Pickering Building*). *Bulletins.*
No. 1. Conditions of saleswomen in Cincinnati mercantile establishments. June, 1915. 16 pp.
No. 2. A study of living conditions in rooming houses. June, 1916. 7 pp.
No. 3. Facts about retail stores. June, 1916. 8 pp.

Cressy, Edward. *An outline of industrial history, with special reference to problems of the present day. London, Macmillan, 1915. 364 pp. Price, $1.10 net.*

DEUTSCH-AMERIKANISCHE TYPOGRAPHIA. *43 Jahresbericht, vom 1. Juli, 1915, bis 30. June, 1916. Indianapolis, 1916. 15.*

Forty-third annual report of the German-American Typographia of the International Typographical Union, July 1, 1915, to June 30, 1916.

DUBLIN, LOUIS I., *of the Metropolitan Life Insurance Co., New York. Factors in American mortality. Reprinted from the American Economic Review, Vol. VI, No. 3, September, 1916, pp. 523–548.*

A study of death rates in the race stocks of New York State, 1910.

FABIAN SOCIETY. *How to pay for the war: being ideas offered to the Chancellor of the Exchequer by the Fabian Research Department; Sidnay Webb, editor. London, 1916. 278 pp. Price 6 shillings net.*

The main proposition advanced by this work is that instead of taxing production more than at present, the burdens of war should be met by untaxing it. In addition to proposals for the development of the post office, the creation of a public service of railway and canal transport, the nationalization of the coal supply, and a "revolution in the income tax," in order to afford some net revenue to the exchequer and provide for the eventual redemption of part of the war debt, it is suggested that the remainder of that debt can be repurchased from the investors and "immobilized" by an ingenious development of a State insurance department which, having nationalized life assurance and guaranteed all existing policies and all future bonuses, will replace the "industrial" policies for which the poor now pay £18,000,000 ($87,597,000) a year by an absolutely universal funeral benefit.

FARNUM, C. J. *The scope of industrial medicine and surgery. 1916. 5 pp.*

A paper read at the meeting of the American Association of Industrial Physicians and Surgeons, Detroit, Mich., June 12, 1916.

FLEMING, A. P. M., AND PEARCE, J. G. *The principles of apprenticeship training, with special reference to the engineering industry. London, Longmans, Green & Co., 1916. 202 pp.*

Discusses the place of the manual worker in industry and the economic importance of training, characteristics demanded from a worker and the extent to which these are developed by the existing educational system, vocational selection and guidance, and apprentice training. An example is given of a system of training developed by the authors in a large manufacturing organization.

HENRY STREET SETTLEMENT. *Committee for vocational scholarships—Directory of the trades and occupations taught at the day and evening schools in Greater New York. New York, 1916. 68 pp. Price 15 cents.*

INSURANCE ALMANAC. *An annual of insurance facts for 1916. Published by the Underwriter Printing & Publishing Co. New York. xvi, 412 pp. Price, $1.*

Contains handy information of the insurance business, the officers and managers of all classes of companies, insurance department officials, associations of underwriters, statutory requirements, summary of workmen's compensation laws, new companies, current legislation. Also general information concerning Federal and State officials; population; telegraph, cable, and postal rates; public debt, and other statistics.

The American experience table of mortality is reproduced, a list of assessment life organizations in the United States is given, also a list of companies writing health insurance. A section showing summaries of workmen's compensation laws in the United States and in foreign countries, with an analysis of principal features of the laws, appears to be taken from the bulletins of the United States Bureau of Labor Statistics, except for a few of the newer acts.

INTERNATIONAL INSTITUTE OF AGRICULTURE. *Annaire international de legislation agricole. 5. année, 1915. Rome, 1916. 1460 pp.*

International yearbook of agricultural legislation.

KNAPPSCHAFTS BERUFSGENOSSENSCHAFT FÜR DAS DEUTSCHE REICH. *31. bericht für das jahr 1915. Berlin, 1916. 44 pp.*

Report of directors of the miners' trade accident association, carrier of the accident insurance in Germany, for the year 1915.

LAUBACH, F. C. *Why there are vagrants; a study based upon an examination of 100 men. New York, 1916. 128 pp. Submitted in partial fulfillment of the requirements for the degree of doctor of philosophy in the faculty of political science, Columbia University.*

An attempt to explain why vagrants do not work long in one place and why they do not accumulate property. The information was obtained at first hand from the wanderers themselves or from correspondence with their acquaintances. The author divides the individual or personal factors making for vagrancy into four main divisions: Moral, temperamental, mental, and physical. He is of the opinion that the first of these is the most important.

MANSFIELD, BURTON. *Life insurance in groups. R. L. Bryan Co., Columbia, S. C. 8 pp.*

A discussion by the insurance commissioner of Connecticut of group life insurance, in which the employer buys life insurance for his employees collectively, as contrasted with individual life insurance.

MERCHANTS AND MANUFACTURERS OF MASSACHUSETTS. *The minimum wage a failing experiment, together with some side lights on the Massachusetts experience. Published by the Executive Committee of the Merchants and Manufacturers of Massachusetts, Boston, 1916. 58 pp.*

Reviewed in the MONTHLY REVIEW for October, 1916, pp. 76–79.

MESS, H. A. *Casual labor at the docks. London, Bell, 1916. 147 pp.* See p. 131.

NATIONAL AMALGAMATED UNION OF LABOR. *Report for quarter ending June 30, 1916. Newcastle-on-Tyne, Richard Mayne, 1916. 73 pp.*

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS. *Pamphlet No. 105. Workingmen's organizations in local antituberculosis campaigns. New York, May, 1916. 64 pp.*

A study of the types of organizations formed by employers and employees to participate in the antituberculosis campaign, designed to help in securing further cooperation from those engaged in industrial enterprises.

NATIONAL ASSOCIATION OF CORPORATION SCHOOLS. *Fourth annual convention. Addresses, reports, bibliographies, and discussions. Pittsburgh, May 30–June 2, 1916. Press of Andrew H. Kellogg Co., New York, 1916. 804 pp.*

Among the subjects covered by committee reports and discussed by the convention were safety and health, special training schools, trade apprenticeship schools, unskilled labor, vocational guidance.

NATIONAL CONFERENCE COMMITTEE OF THE RAILWAYS AND THE BROTHERHOOD OF LOCOMOTIVE ENGINEERS, BROTHERHOOD OF LOCOMOTIVE FIREMEN AND ENGINEMEN, ORDER OF RAILWAY CONDUCTORS, AND BROTHERHOOD OF RAILROAD TRAINMEN. *Minutes of meetings. June 1 to 15, 1916, 551 pp.; August 8 and 9, pp. 552–593. The Martin Reporting Co., 220 West Forty-second Street, New York.*

At the conference held in June demands of the unions for an eigst-hour day and time and a half for overtime were refused by the railroads. At the August conference the vote of the unions was announced favoring a strike and the conference adjourned without a settlement. The threatened strike was called off upon the approval by the President, September 3, 1916, of the Federal act entitled "An act to establish an eight-hour day for employees of carriers engaged in interstate commerce, and for other purposes."

NATIONAL CONSUMERS' LEAGUE (289 *Fourth Avenue, New York*). *Bulletins.*
Hours of labor series.
No. 1. Hours of labor and realism in constitutional law, by Felix Frankfurter. 1916. 21 pp. Reprinted from the Harvard Law Review, Vol. XXIX, No. 4.
No. 2. Labor, law, and life. 4 pp. An editorial reprinted from The Independent, April 24, 1916.
No. 3. Building up industrial liberty. 4 pp. An editorial reprinted from The Outlook, April 26, 1916.
Minimum wages series.
No. 9. A substitute for charity, by Constance D. Leupp. 11 pp. Reprinted from Pearson's Magazine, January, 1915.
No. 11. The case for the minimum wage. 28 pp. Reprinted from The Survey, Feb. 6, 1915.

Contains the following articles: Status of legislation in the United States, by Florence Kelley; The Constitution and the minimum wage, by Louis D. Brandeis; Wages of women in the State of New York, by H. B. Woolston; The State and the minimum wage, by J. A. Hobson; Is the minimum wage a menace to industry, by N. I. Stone; The Australian experience with wages boards, by M. B. Hammond.

No. 12. Meaning of the minimum wage, by Robert W. Bruère. 7 pp. Reprinted from Harper's Magazine, January, 1916.
No. 14. A new province for law and order. Industrial peace through minimum wage and arbitration, by H. B. Higgins. 1915. 27 pp. Reprinted from the Harvard Law Review, Vol. XXIX, No. 1.
Safety at sea series:
No. 4. The La Follette law from the Consumers' League point of view, by Florence Kelley. 7 pp. Reprinted from the Proceedings of the Academy of Political Science, October, 1915.
Women in industry series:
No. 5. Selected bibliography. February, 1915. 3 pp.
No. 6. Eight-hour laws in the United States. 7 pp. Reprinted from brief in defense of the California eight-hour law for women, submitted to the Supreme Court of the United States, January, 1915, by Louis D. Brandeis and Josephine Goldmark.
No. 9. A famous bad decision reversed. 4 pp. An editorial reprinted from The Outlook, Apr. 28, 1915.
No. 10. Twenty-five years of the Consumers' League movement, by Florence Kelley. 6 pp. Reprinted from The Survey, Nov. 27, 1915.
No. 11. Survey of wage-earning girls below 16 years of age in Wilkes-barre, Pa., 1915, by Sarah H. Atherton. 65 pp. Price, 25 cents.
No. 12. Tenement home work and the courts, by Josephine Goldmark. 1916. 3 pp. An editorial reprinted from The Survey, Feb. 19, 1916.
No. 13. Women in industry—The eight-hour day and rest at night, by Florence Kelley. May, 1916. 4 pp.

NATIONAL SAFETY COUNCIL. *Third annual report by the secretary, for the year ending July 31, 1916. Chicago, Aug. 1, 1916. 4 pp.*

Briefly outlines the activities of the council during the year 1915–16 in carrying out its purpose of spreading the safety idea throughout the United States, Canada, and foreign countries.

NATIONAL WINDOW GLASS WORKERS. *Constitution and by-laws, revised by special committee, Feb. 3, 1914; reprinted with changes and additional laws, Feb. 3, 1914, to May 27, 1916. Cleveland, Ohio, 1916. 29 pp.*

NEGRO YEAR BOOK. *An annual encyclopedia of the Negro, 1916–17. Published by the Negro Year Book Publishing Co., Tuskegee Institute, Ala., 1916. 488 pp. Price, 35.*

NEW YORK (CITY) MAYOR. *The lockout in the cloak and suit industry. The record of the public hearing before Mayor John Purroy Mitchel at the City Hall, New York, Apr. 26, 1916. New York, 1916. 11 pp.*

OERTZEN, VON. *Zur Forstarbeiterfrage in Mecklenburg, bearbeitet im Auftrage der Studienkommission für Erhaltung des Bauernstandes, für Kleinsiedlung und Landarbeit. Jena, 1914. vi, 93 pp. 17 statistical tables.*

A study of the need of provisions for obtaining a permanent force of laborers for forestry work in Mecklenburg, one of the German States where considerable interior colonization has taken place.

PERRY, LORINDA. *Millinery as a trade for women. New York, Longmans, Green & Co., 1916. 134 pp. Price, $1.50.* See p. 32.

REA, SAMUEL. *Why the principle of arbitration can not be sacrificed. A statement to the American public, issued at Washington, D. C., Aug. 27, 1916, by the president of the Pennsylvania Railroad System. 8 pp.*

Explains the attitude of the railroad executives of the country with reference to retaining the principle of arbitration in the adjustment of differences affecting interstate commerce.

ROYAL ECONOMIC SOCIETY (*9 Adelphi Terrace, Strand, London, W. C.*). *By-laws and list of fellows. Corrected to Sept. 1, 1916. London, 1916. 37 pp.*

RUBINOW, I. M. *Standards of health insurance. New York, Holt, 1916. 322 pp.* See p. 114.

SCATTERGOOD, CLAUDE E. *Cost accounting in casualty insurance. 1916. Reprinted from Proceedings of the Casualty Actuarial and Statistical Society of America, February, 1916, Vol. II, Part II, No. 5, pp. 253–261.*

—— *The synthesis of rates for workmen's compensation. New York, 1916. 31 pp. Published by the Fidelity and Casualty Co. of New York.* See p. 85.

SHERMAN, P. TECUMSEH. *Workmen's compensation law. Personal injury by accident arising out of and in the course of employment. Published by Workmen's Compensation Publicity Bureau, New York, 1916. 67 pp.*

SOLVAY PROCESS CO. *Profit sharing, pensions, mutual aid, and welfare work. Syracuse, N. Y., 1915. 8 pp.*

TEMPLE, FREDERICK. *War finance and the worker. London, Commonwealth Press. (1916) 16 pp.*

UNITED TYPOTHETÆ AND FRANKLIN CLUBS OF AMERICA. *Reports of committee on apprentices. Sept. 21, 1915. 18 pp. Sept. 14, 1916. 20 pp.*

WARNE, F. J. *The tide of immigration. New York, Appleton, 1916. 388 pp. Price, $2.50 net.*

Treats of the fundamental economic forces behind the movement of population to and from the United States and the governmental machinery for regulating immigration. Discusses the campaign for more restrictive legislation, probable effects of the European war on immigration, volume and sources of immigration, its influence on social progress, conflict between immigrant and native worker for jobs and wages, and geographical distribution of immigration.

WEBB, SIDNEY. *Toward social democracy? A study of social evolution during the past three-quarters of a century. London. Fabian Society [1916]. 48 pp. Price, 1 shilling net.*

WORMAN, H. A. *How to get workmen. Finding and picking the right man for the work. Chicago, A. W. Shaw Co., 1913. 64 pp.*

Contains chapters on recruiting the working force, personal interviews in hiring men, hiring unskilled, semiskilled, and skilled workmen, promoting from the ranks, neighborhood sources of supply, and getting in touch with out-of-town workmen.

YOUNG, ARTHUR N. *The single-tax movement in the United States. Princeton, N. J., Princeton University Press, 1916. 340 pp.*

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the Annual and Special Reports and of the bimonthly Bulletin has been discontinued, and since July, 1912, a Bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These Bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual Bulletins falling under each, is given below. A list of the Reports and Bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application.]

Wholesale Prices.

No. 1. Wholesale prices, 1890 to 1912. (Bul. 114.)
No. 2. Wholesale prices, 1890 to 1913. (Bul. 149.)
No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. 173.)
No. 4. Wholesale prices, 1890 to 1914. (Bul. 181.)
No. 5. Wholesale prices, 1890 to 1915. (Bul. 200.)

Retail Prices and Cost of Living.

No. 1. Retail prices, 1890 to 1911: Part I. (Bul. 105: Part I.)
Retail prices, 1890 to 1911: Part II—General tables. (Bul. 105: Part II.)
No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. 106: Part I.)
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. 106: Part II.)
No. 3. Retail prices, 1890 to August, 1912. (Bul. 108.)
No. 4. Retail prices, 1890 to October, 1912. (Bul. 110.)
No. 5. Retail prices, 1890 to December, 1912. (Bul. 113.)
No. 6. Retail prices, 1890 to February, 1913. (Bul. 115.)
No. 7. Sugar prices, from refiner to consumer. (Bul. 121.)
No. 8. Retail prices, 1890 to April, 1913. (Bul. 125.)
No. 9. Wheat and flour prices, from farmer to consumer. (Bul. 130.)
No. 10. Retail prices, 1890 to June, 1913. (Bul. 132.)
No. 11. Retail prices, 1890 to August, 1913. (Bul. 136.)
No. 12. Retail prices, 1890 to October, 1913. (Bul. 138.)
No. 13. Retail prices, 1890 to December, 1913. (Bul. 140.)
No. 14. Retail prices, 1907 to December, 1914. (Bul. 156.)
No. 15. Butter prices, from producer to consumer. (Bul. 164.)
No. 16. Retail prices, 1907 to June, 1915. (Bul. 184.)
No. 17. Retail prices, 1907 to December, 1915. (Bul. 197.)

Wages and Hours of Labor.

No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. 128.)
No. 2. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912. (Bul. 129.)
No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. 131.)
No. 4. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. 134.)
No. 5. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912. (Bul. 135.)
No. 6. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912. (Bul. 137.)
No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. 143.)
No. 8. Wages and regularity of employment in the dress and waist industry of New York City. (Bul. 146.)
No. 9. Wages and regularity of employment in the cloak, suit, and skirt industry. (Bul. 147.)
No. 10. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913. (Bul. 150.)
No. 11. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912. (Bul. 151.)
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No. 15. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913. (Bul. 163.)
No. 16. Wages and hours of labor in the iron and steel industry, 1907 to 1913. (Bul. 168.)
No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. 171.)
No. 18. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914. (Bul. 177.)
No. 19. Wages and hours of labor in the boot and shoe industry, 1907 to 1914. (Bul. 178.)
No. 20. Wages and hours of labor in the men's clothing industry, 1911 to 1914. (Bul. 187.)
No. 21. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914. (Bul. 190.)
No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. 194.)
No. 23. Street railway employment in the United States. (Bul. 204.) [In press.]

Employment and Unemployment.

No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. 192.)
No. 2. Unemployment in the United States. (Bul. 195.)
No. 3. Proceedings of Employment Managers' Conference. (Bul. 196.)
No. 4. Proceedings of the Conference of Employment Managers' Association of Boston. (Bul. 202.)
No. 5. The British System of Labor Exchanges. (Bul. 206.) [In press.]

For material relating to these subjects, but not included in this series, see Miscellaneous series, Nos. 1, 10, 12 (Buls. 109, 172, 183).

Women in Industry.

No. 1. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. (Bul. 116.)
No. 2. Working hours of women in the pea canneries of Wisconsin. (Bul. 119.)
No. 3. Employment of women in power laundries in Milwaukee. (Bul. 122.)
No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bul. 160.)
No. 5. Summary of the report on condition of woman and child wage earners in the United States. (Bul. 175.)
No. 6. Effect of minimum-wage determinations in Oregon. (Bul. 176.)
No. 7. The boot and shoe industry in Massachusetts as a vocation for women. (Bul. 180.)
No. 8. Unemployment among women in department and other retail stores of Boston, Mass. (Bul. 182.)
No. 9. Dressmaking as a trade for women. (Bul. 193.)

For material relating to this subject, but not included in this series, see Miscellaneous series, Nos. 2, 3, 8 (Buls. 117, 118, 167).

Workmen's Insurance and Compensation (including laws relating thereto).

No. 1. Care of tuberculous wage earners in Germany. (Bul. 101.)
No. 2. British National Insurance Act, 1911. (Bul. 102.)
No. 3. Sickness and accident insurance law of Switzerland. (Bul. 103.)
No. 4. Law relating to insurance of salaried employees in Germany. (Bul. 107.)
No. 5. Workmen's compensation laws of the United States and foreign countries. (Bul. 126.)
No. 6. Compensation for accidents to employees of the United States. (Bul. 155.)
No. 7. Compensation legislation of 1914 and 1915. (Bul. 185.)
No. 8. Compensation laws of the United States and foreign countries. (Bul. 203.) [In press.]

Industrial Accidents and Hygiene.

No. 1. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. (Bul. 104.)
No. 2. Hygiene of the painters' trade. (Bul. 120.)
No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bul. 127.)
No. 4. Lead poisoning in the smelting and refining of lead. (Bul. 141.)
No. 5. Industrial accident statistics. (Bul. 157.)
No. 6. Lead poisoning in the manufacture of storage batteries. (Bul. 165.)
No. 7. Industrial poisons used in the rubber industry. (Bul. 179.)
No. 8. Report of British departmental committee on danger in the use of lead in the painting of buildings. (Bul. 188.)
No. 9. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. (Bul. 201.) [Limited edition.]
No. 10. Anthrax as an occupational disease. (Bul. 205.) [In press.]
No. 11. Causes of death by occupations. (Bul. 207.) [In press.]
No. 12. Hygiene of the printing trades. (Bul. 209.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).

No. 1. Conciliation and arbitration in the building trades of Greater New York. (Bul. 124.)
No. 2. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. (Bul. 133.)
No. 3. Michigan copper district strike. (Bul. 139.)
No. 4. Industrial court of the cloak, suit, and skirt industry of New York City. (Bul. 144.)
No. 5. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. (Bul. 145.)
No. 6. Collective bargaining in the anthracite coal industry. (Bul. 191.)
No. 7. Collective agreements in the men's clothing industry. (Bul. 198.)

Labor Laws of the United States (including decisions of courts relating to labor).

No. 1. Labor legislation of 1912. (Bul. 111.)
No. 2. Decisions of courts and opinions affecting labor, 1912. (Bul. 112.)
No. 3. Labor laws of the United States, with decisions of courts relating thereto. (Bul. 148.)
No. 4. Decisions of courts and opinions affecting labor, 1913. (Bul. 152.)
No. 5. Labor legislation of 1914. (Bul. 166.)
No. 6. Decisions of courts affecting labor, 1914. (Bul. 169.)
No. 7. Labor legislation of 1915. (Bul. 186.)
No. 8. Decisions of courts affecting labor, 1915. (Bul. 189.)

Foreign Labor Laws.

No. 1. Administration of labor laws and factory inspection in certain European countries. (Bul. 142.)

Vocational Education.

No. 1. Vocational education survey of Minneapolis. (Bul. 199.) [In press.]

For material relating to this subject, but not included in this series, see Wages and hours of labor series, No. 9 (Bul. 147); Conciliation and arbitration series, No. 5 (Bul. 145); Miscellaneous series, Nos. 6, 7 (Buls. 159, 162).

Miscellaneous Series.

No. 1. Statistics of unemployment and the work of employment offices. (Bul. 109.)
No. 2. Prohibition of nightwork of young persons. (Bul. 117.)
No. 3. Ten-hour maximum working-day for women and young persons. (Bul. 118.)
No. 4. Employers' welfare work. (Bul. 123.)
No. 5. Government aid to home owning and housing of working people in foreign countries. (Bul. 158.)
No. 6. Short-unit courses for wage earners and a factory school experiment. (Bul. 159.)
No. 7. Vocational education survey of Richmond, Va. (Bul. 162.)
No. 8. Minimum-wage legislation in the United States and foreign countries. (Bul. 167.)
No. 9. Foreign food prices as affected by the war. (Bul. 170.)
No. 10. Unemployment in New York City N. Y. (Bul. 172.)
No. 11. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915. (Bul. 174.)
No. 12. Regularity of employment in the women's ready-to-wear garment industries. (Bul. 183.)
No. 13. Profit sharing in the United States. (Bul. 208.) [In press.]

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U. S. DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

ROYAL MEEKER, Commissioner

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOLUME III—DECEMBER, 1916—NUMBER 6

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MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOL. III—NO. 6 WASHINGTON DECEMBER, 1916

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, OCTOBER 16 TO NOVEMBER 15, 1916.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between October 16 and November 15 in 11 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, OCT. 16 TO NOV. 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, Standard Oil Co. and other oil companies, Bayonne, N. J.			Adjusted.
Strike, New York Mills, near Utica, N. Y.	2,700		Do.
Strike of chain welders, York, Pa.	250	550	Do.
Strike, Hightstown Rug Co., Hightstown, N. J.	25		Pending.[1]
Strike of machinists, Duplex Printing Press Co., Battle Creek, Mich.			Pending.
Strike, Phœnix Hosiery Co., Milwaukee, Wis.			Do.
Strike, Holeproof Hosiery Co., Milwaukee, Wis.			Do.
Strike of machinists, Carolina, Clinchfield & Ohio Railway Co., Erwin, Tenn.			Do.
Labor dispute, Arizona Copper Co., Clifton, Ariz.			Do.
Controversy between Great Northern R. R. Co. and its carmen, St. Paul, Minn.			Do.
Lockout, Indianapolis Street Ry. Co.			Do.

[1] Information received on Oct. 27 states that strikers have returned to work, pending negotiations for settlement.

Cases noted in previous issues of the REVIEW as pending have been disposed of as follows:

Strike of iron miners, Mesabi region, Minnesota; adjusted.

Strike of street railway employees, Harrisburg, Pa.; unable to adjust.

Strike of milk delivery drivers, St. Louis, Mo.; pending (1 dairy signed up).

Controversy between Coal & Coke Railway Co. and shop employees, Elkins, W. Va.; adjusted.

Strike of shingle weavers, Everett, Wash.; adjusted.
Strike of pattern makers, Detroit, Mich.; adjusted.
Lockout, Southern Saddlery Co., Chattanooga, Tenn.; unable to adjust.

FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During September, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 17,169 persons in employment as compared with 16,313 during August, 1916. The operations of the different offices throughout the country, by months, since May, 1915, when fuller reports began to be made, are contained in the statement following:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION DURING THE MONTHS OF MAY, 1915, TO SEPTEMBER, 1916.

Year and month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.
1915.					
May	638	3,826	12,132	3,752	3,495
June	1,249	3,601	14,530	5,131	4,646
July	1,160	8,665	18,061	6,360	6,085
August	1,279	7,931	17,827	7,321	6,757
September	1,201	4,551	12,234	5,671	5,405
October	1,164	5,423	12,215	5,460	5,086
November	847	4,650	11,908	4,459	4,146
December	698	3,588	11,902	2,622	2,170
1916.					
January	933	5,063	15,015	4,300	3,419
February	1,423	6,413	14,257	5,036	4,185
March	3,443	10,209	19,484	8,113	7,030
April	3,805	12,104	13,498	8,843	7,653
May	4,918	21,326	17,614	12,988	11,458
June	4,826	17,402	18,824	13,839	11,920
July	5,488	23,657	24,058	17,608	16,289
August	6,490	26,791	23,720	18,062	16,313
September	8,312	27,185	26,276	19,643	17,169

The following statement of the work of the 18 different zones covering the whole country gives details for August and September, 1916:

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR THE MONTHS OF AUGUST AND SEPTEMBER, 1918.

Zone number and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.
1. Boston, Mass	3		1,640		54	51	12		12	
2. New York, N. Y	231	162	1,303	635	1,692	2,195	579	347	550	328
Buffalo, N. Y	115	147	815	1,032	839	1,002	787	971	634	859
Total	346	309	2,118	1,667	2,531	3,197	1,366	1,318	1,184	1,187
2a. Newark, N. J.[1]		1,237		1,643		2,978		1,712		1,317
Jersey City, N. J		12		407		173		125		107
Total		1,249		2,050		3,151		1,837		1,424
3. Philadelphia, Pa	77	81	1,328	131	257	144	246	174	209	115
Pittsburgh, Pa	24	28	425	590	809	757	491	495	463	461
Wilmington, Del	19	16	338	108	52	61	48	49	40	46
Total	120	125	2,091	829	1,118	962	785	718	712	622
4. Baltimore, Md	53	59	217	90	161	163	145	106	145	106
5. Norfolk, Va	13	9	50	18	222	71	75	32	60	23
6. Jacksonville, Fla		16		110	511	37	198		198	
Miami, Fla	3	9	3	35	38	67	3	35	1	30
Savannah, Ga	1	3	1	40	187	236	1	38	1	38
Charleston, S. C	2		11		12	31	83	127	83	127
Mobile, Ala					2	8				
Total	6	28	15	185	750	379	285	200	283	195
7. New Orleans, La	30	50	42	1,078	390	500	50	173	83	27
Gulfport, Miss	1	1	1	300	60	59	6			
Memphis, Tenn	4	5	6	523	49	104		37		37
Total	35	56	49	1,901	499	663	56	210	83	64
8. Galveston, Tex	6	1	8	1	40	28	8	7	4	6
Houston, Tex	3	4	6	11	14	17	3	2	3	2
Amarillo, Tex					1					
Eagle Pass, Tex					1		1			
El Paso, Tex										
Albuquerque, N. Mex					2	2				
Total	9	5	14	12	58	47	12	9	7	8
9. Cleveland, Ohio	10	4	15	36	101	111	96	96	13	26
10. Chicago, Ill	252	559	1,709	1,855	1,634	1,677	1,619	1,574	1,592	1,524
Detroit, Mich	241	331	1,256	971	1,066	688	1,066	688	1,062	673
Sault Ste. Marie, Mich.	9	7	120	1,033	88	50	89	36	89	36
Indianapolis, Ind	68	90	721	653	654	660	490	574	417	542
Total	570	987	3,806	4,512	3,442	3,075	3,264	2,872	3,160	2,775
11. Minneapolis, Minn	55	26	70	43	260	36	49	12	49	12
12. St. Louis, Mo	215	170	550	1,030	392	382	320	399	302	384
Kansas City, Mo	558	677	1,142	1,524	1,012	1,339	1,032	1,403	833	1,077
Total	773	847	1,692	2,554	1,404	1,721	1,352	1,802	1,135	1,461
13. Denver, Colo	2	4	2	6	20	26	10	7	2	3
14. Helena, Mont	8	4	18	4	18	11	8	3	6	3
Moscow, Idaho		5		5	4	5	4	5	4	5
Total	8	9	18	9	22	16	12	8	10	8

[1] Tentative assignment as a zone, pending permanent organization as a zone.

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR THE MONTHS OF AUGUST AND SEPTEMBER, 1916—Concluded.

Zone number and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.	Aug.	Sept.
15. Seattle, Wash	135	169	880	825	957	1,092	402	357	354	319
Aberdeen, Wash	25	14	180	300	378	329	180	101	172	101
Bellingham, Wash	22	17	35	39	66	58	42	25	34	21
Colfax, Wash	246	9	522	23	375	18	365	81	365	81
Everett, Wash	59	12	785	98	10	4	8	3	6	2
North Yakima, Wash.	850	821	1,838	2,505	1,766	1,864	1,575	1,712	1,451	1,549
Spokane, Wash	109	99	605	258	712	792	605	258	595	246
Tacoma, Wash	442	686	1,150	1,333	1,325	1,084	1,028	1,267	1,018	1,252
Walla Walla, Wash	213	164	400	278	316	235	285	164	276	152
Sumner, Wash	....	....	....	....	....	....	....	....	....	....
Puyallup, Wash	....	....	....	....	....	....	....	....	....	....
Wenatchee, Wash	....	113	....	405	....	364	....	328	....	328
Total	2,101	2,104	6,395	6,064	5,905	5,840	4,490	4,296	4,271	4,051
16. Portland, Oreg	1,439	1,556	3,269	5,177	2,627	4,017	2,378	3,963	2,262	3,755
Astoria, Oreg	25	31	170	276	171	283	140	124	104	119
Total	1,464	1,587	3,439	5,453	2,798	4,300	2,518	4,087	2,366	3,874
17. San Francisco, Cal	425	394	817	763	1,330	1,314	807	865	321	401
Reno, Nev	....	75	....	263	....	303	....	252	....	237
Total	425	469	817	1,026	1,330	1,617	807	1,117	321	638
18. Los Angeles, Cal	1	4	1	17	149	93	1	18	1	17
San Diego, Cal	348	431	651	713	1,035	757	866	898	688	675
Total	349	435	652	730	1,184	850	867	916	689	692
Harvest hands	[1] 78	....	[1] 3,691	....	[1] 1,861	....	[1] 1,861	....	[1] 1,861	....
Grand total	6,420	8,312	26,791	27,185	23,720	26,276	18,062	19,643	16,313	17,169

[1] Through Hudson, S. Dak., branch of Minneapolis office. Figures for entire season.

The above data do not include the activities of the United States Employment Service in cooperation with State and city employment offices. The data relating thereto are shown in the following table:

ACTIVITIES OF THE UNITED STATES EMPLOYMENT SERVICE IN COOPERATION WITH STATE AND MUNICIPAL EMPLOYMENT OFFICES, SEPTEMBER, 1916.

Office.	Opportunities received.		Applications for employment.		
	Applications for help.	Persons applied for.	Applications received.	Referred to employment.	Number actually employed.
New York, N. Y., in cooperation with—					
State office	1,335	1,911	1,081	2,025	1,185
City office	2,167	2,530	2,163	3,486	2,053
Buffalo, N. Y., in cooperation with State office	982	750	1,261	1,831	562
Total	4,484	5,191	4,505	7,342	3,800

WORK OF STATE AND MUNICIPAL EMPLOYMENT BUREAUS IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT BUREAUS IN CANADA.

In the following table data are presented for October, 1915, and October, 1916, relative to the operations of public employment offices. Information is given for the United States for State employment bureaus in 12 States, municipal employment bureaus in 8 States, State-city employment bureaus in 2 States, and a city-private employment bureau in 1 State. Figures are also furnished for 2 Canadian employment bureaus.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, OCTOBER, 1915 AND 1916.

UNITED STATES.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
California (municipal):						
Berkeley—						
October, 1915	158	177	74	442	177	177
October, 1916	237	257	62	28	242	242
Sacramento—						
October, 1915	(1)	416	72	(1)	416	416
October, 1916	(1)	336	65	(1)	336	336
California (State-city):						
Los Angeles[2]—						
October, 1915	(1)	(1)	2,142	(1)	4,158	4,029
October, 1916	3,337	5,565	2,305	(1)	5,365	4,812
California (State):						
Oakland—						
October, 1916	578	965	502	375	1,003	713
Sacramento—						
October, 1916	428	1,310	791	361	1,104	1,032
San Francisco—						
October, 1916	1,264	3,114	2,713	1,041	2,880	2,178
Total:						
October, 1915					4,751	4,622
October, 1916					[3] 10,930	[3] 9,313
Connecticut (State):						
Bridgeport—						
October, 1915	427	(1)	(1)	(1)	(1)	369
October, 1916	822	(1)	(1)	(1)	(1)	739
Hartford—						
October, 1915	724	(1)	(1)	(1)	(1)	550
October, 1916	1,272	(1)	(1)	(1)	(1)	947
New Haven—						
October, 1915	365	(1)	(1)	(1)	(1)	264
October, 1916	1,072	(1)	(1)	(1)	(1)	868
Norwich—						
October, 1915	144	(1)	(1)	(1)	(1)	130
October, 1916	180	(1)	(1)	(1)	(1)	170
Waterbury—						
October, 1915	233	(1)	(1)	(1)	(1)	172
October, 1916	154	(1)	(1)	(1)	(1)	111
Total:						
October, 1915						1,485
October, 1916						2,835
Illinois (municipal):						
Chicago—						
October, 1916	23	333	200	(1)	333	149

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[1] Not reported.
[2] Includes Los Angeles district, 8 counties.
[3] Including data for State employment offices, which were not established until January, 1916.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, OCTOBER, 1915 AND 1916—Contd.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Indiana (State):						
Fort Wayne—						
October, 1915	234	497	360	88	448	432
October, 1916	308	510	339	80	419	401
South Bend—						
October, 1915	312	916	441	120	422	339
October, 1916	328	1,974	427	96	481	407
Total—						
October, 1915					870	771
October, 1916					900	808
Iowa (State):						
Des Moines—						
October, 1916	60	317	136	19	138	69
Kansas (State):						
Topeka—						
October, 1915	12	73	41	12	33	27
October, 1916	19	118	73	(¹)	60	59
Kentucky (city-private):						
Louisville—						
October, 1915	(¹)	128	496	1,022	122	78
October, 1916	(¹)	285	332	705	290	128
Kentucky (State):						
Louisville—						
October, 1915	42	42			227	42
October, 1916	687	687			873	873
Total—						
October, 1915					349	120
October, 1916					1,163	1,001
Massachusetts (State):						
Boston—						
October, 1915	1,683	2,116	² 1,243	(¹)	³ 3,443	1,675
October, 1916	2,497	2,728	² 1,485	(¹)	³ 3,721	1,593
Fall River—						
October, 1915	102	107	² 27	(¹)	³ 98	85
October, 1916	179	188	² 16	(¹)	³ 156	149
Springfield—						
October, 1915	609	791	² 277	(¹)	³ 993	670
October, 1916	1,067	1,500	² 516	(¹)	³ 1,673	1,117
Worcester—						
October, 1915	643	804	² 484	(¹)	³ 1,041	529
October, 1916	1,005	1,301	² 608	(¹)	³ 1,407	713
Total—						
October, 1915					³ 5,575	2,959
October, 1916					³ 6,956	3,572
Michigan (State):						
Battle Creek—						
October, 1916	96	192	154	(¹)	143	143
Bay City—						
October, 1916	38	120	84	(¹)	84	84
Detroit—						
October, 1915	(¹)	(¹)	(¹)	(¹)	4,608	4,608
October, 1916	510	6,531	(¹)	(¹)	5,992	5,992
Flint—						
October, 1915	(¹)	(¹)	(¹)	(¹)	548	548
October, 1916	86	886	771	(¹)	771	771
Grand Rapids—						
October, 1915	(¹)	(¹)	(¹)	(¹)	1,138	1,138
October, 1916	476	896	881	(¹)	872	872
Jackson—						
October, 1915	(¹)	(¹)	(¹)	(¹)	784	784
October, 1916	359	828	838	(¹)	794	794
Kalamazoo—						
October, 1915	(¹)	(¹)	(¹)	(¹)	453	453
October, 1916	305	460	430	(¹)	415	415
Lansing—						
October, 1916	96	275	262	(¹)	246	246

[1] Not reported. [2] Number who were registered. [3] Number of offers of positions.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, OCTOBER, 1915 AND 1916—Contd.

UNITED STATES—Continued.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Michigan (State)—Concluded.						
Muskegon—						
October, 1916	60	230	235	(1)	222	205
Saginaw—						
October, 1915	(1)	(1)	(1)	(1)	990	990
October, 1916	183	946	790	(1)	790	790
Total—						
October, 1915					[2] 8,521	[2] 8,521
October, 1916					10,345	10,312
Minnesota (State):						
Duluth—						
October, 1915	(1)	(1)	(1)	(1)	(1)	1,162
October, 1916	(1)	(1)	(1)	(1)	(1)	1,379
Minneapolis—						
October, 1915	(1)	(1)	(1)	(1)	(1)	2,625
October, 1916	(1)	(1)	(1)	(1)	(1)	2,573
St. Paul—						
October, 1915	(1)	(1)	(1)	(1)	(1)	1,492
October, 1916	(1)	(1)	(1)	(1)	(1)	1,586
Total—						
October, 1915					(1)	5,279
October, 1916					(1)	5,538
Montana (municipal):						
Butte—						
October, 1915	558	245	560	(1)	500	345
October, 1916	666	380	640	(1)	400	394
New York (municipal):						
October, 1915	830	977	2,509	(1)	1,864	744
October, 1916	2,977	8,304	2,528	(1)	4,311	2,138
New York (State):						
Albany—						
October, 1915	282	355	666	220	579	265
October, 1916	570	838	600	272	930	516
Brooklyn—						
October, 1915	774	1,356	1,668	593	1,739	723
October, 1916	1,757	2,495	1,325	598	2,694	1,601
Buffalo—						
October, 1915	756	756	682	193	784	508
October, 1916	1,067	2,118	1,665	194	2,118	2,134
Rochester—						
October, 1915	882	1,477	816	72	1,373	926
October, 1916	1,608	2,262	945	343	1,896	1,183
Syracuse—						
October, 1915	621	964	831	65	969	671
October, 1916	926	1,293	579	123	1,029	790
Total—						
October, 1915					7,308	3,847
October, 1916					12,967	8,362
Ohio (State-city):						
Akron—						
October, 1915	(1)	1,658	1,001	1,491	1,452	1,216
October, 1916	(1)	2,063	780	1,401	1,629	1,382
Cincinnati—						
October, 1915	(1)	1,348	2,130	3,645	1,407	1,154
October, 1916	(1)	1,819	1,342	2,382	1,968	1,078
Cleveland—						
October, 1915	(1)	7,161	2,448	5,999	5,144	4,311
October, 1916	(1)	8,184	2,961	7,571	7,282	5,969
Columbus—						
October, 1915	(1)	2,050	911	2,073	1,978	1,708
October, 1916	(1)	2,678	896	2,590	2,290	1,872
Dayton—						
October, 1915	(1)	1,182	960	1,302	1,093	972
October, 1916	(1)	1,138	640	905	910	813
Toledo—						
October, 1915	(1)	3,951	1,898	2,185	2,921	2,685
October, 1916	(1)	4,098	1,762	2,570	3,098	2,640

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[1] Not reported.

[2] Exclusive of offices at Battle Creek, Bay City, Lansing, and Muskegon, opened since October, 1915.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, OCTOBER, 1915 AND 1916—Concld.

UNITED STATES—Concluded.

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Renewals.		
Ohio (State-city)—Concluded.						
Youngstown—						
October, 1915	(1)	1,446	929	1,028	1,004	881
October, 1916	(1)	1,198	625	1,090	1,123	971
Total—						
October, 1915					14,999	12,927
October, 1916					18,260	14,725
Oregon (municipal):						
Portland—						
October, 1916	(1)	4,200	2,148	(1)	(1)	3,886
Pennsylvania (State):						
Altoona—						
October, 1916	(1)	67	16	6	26	25
Harrisburg—						
October, 1916	(1)	437	240	77	222	192
Johnstown—						
October, 1916	(1)	180	50	10	55	46
Philadelphia—						
October, 1916	(1)	1,186	806	511	1,121	946
Pittsburgh—						
October, 1916	(1)	789	700	143	544	479
Total—						
October, 1916					1,968	1,688
Virginia (municipal):						
Richmond—						
October, 1915	253	514	671	(1)	468	181
October, 1916	270	403	434	(1)	535	225
Washington (Federal-municipal):						
Tacoma [2]—						
Washington (municipal):						
Everett—						
October, 1915	(1)	(1)	(1)	(1)	(1)	231
October, 1916	(1)	740	(1)	(1)	(1)	516
Seattle—						
October, 1915	1,914	2,332	(1)	(1)	2,472	2,121
October, 1916	3,561	6,646	(1)	(1)	6,593	6,208
Spokane—						
October, 1915	(1)	(1)	(1)	(1)	964	841
October, 1916	2,932	4,275			3,986	3,935
Total—						
October, 1915					(1)	3,193
October, 1916					(1)	10,654
Rhode Island (State):						
Providence—						
October, 1915	264	334	240	117	(1)	334
October, 1916	256	279	141	95	(1)	279
Texas (municipal):						
Dallas—						
October, 1915	165	308	53	2	308	308
October, 1916	272	502	49	6	536	[illegible]56
Fort Worth—						
October, 1915	132	287	[3] 566	(1)	305	269
October, 1916	149	417	(1)	(1)	299	283
Total—						
October, 1915					613	577
October, 1916					835	739
Quebec (Province):						
Montreal—						
October, 1916	337	870	[3] 492	(1)	510	432
Quebec—						
October, 1915	(1)	124	[3] 208	(1)	(1)	109
October, 1916	(1)	322	[3] 140	(1)	(1)	122
Total—						
October, 1915					(1)	109
October, 1916					(1)	554

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[1] Not reported.

[2] Figures for this office are carried regularly in the REVIEW under the subject "Federal employment work of the Department of Labor," to which the reader is referred.

[3] Number applying for work.

EMPLOYMENT IN SELECTED INDUSTRIES IN OCTOBER, 1916.

Continuing the current statistics that have appeared in the Monthly Review for a year past, figures are here given indicating the change in the volume of employment in manufacturing establishments in the United States in October, 1916, as compared with the same month in the preceding year and as compared with the preceding month. The figures are compiled from returns from representative establishments throughout the country. Four tables are presented, two relating to the number of employees on the pay roll and the amount of the pay roll, and two presenting the number of employees actually working on a specified day, namely, the last full-length working day of the pay-roll period reported.

The comparison with a year ago continues exceedingly favorable. The first table shows that in 8 of the 10 industries represented the number of employees on the pay roll was greater in October, 1916, than in October, 1915. As was the case last month in the September comparison, the two industries showing a reduction are cotton manufacturing and cigar manufacturing, while the industry showing the greatest increase in the year interval is again iron and steel. The amount of money paid to employees was greater in all of the 10 industries in October, 1916, than in October, 1915. The greatest increase reported is 48.7 per cent for iron and steel.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN OCTOBER, 1915, AND OCTOBER, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for October both years.	Period of pay roll.	Number on pay roll in October—		Per cent of increase (+) or decrease (−).	Amount of pay roll in October—		Per cent of increase (+) or decrease (−).
				1915	1916		1915	1916	
Boots and shoes	85	65	1 week	47,180	51,590	+ 9.3	$585,814	$648,856	+10.8
Cotton manufacturing	89	53	...do	52,406	51,286	− 2.1	417,630	486,573	+16.5
Cotton finishing	19	16	...do	13,322	13,653	+ 2.5	144,299	172,093	+19.3
Hosiery and underwear	82	60	...do	30,711	32,608	+ 6.2	276,633	316,468	+14.4
Woolen	56	44	...do	39,557	40,683	+ 2.8	355,521	466,888	+31.3
Silk	64	46	2 weeks	18,283	19,439	+ 6.3	390,904	451,982	+15.6
Men's ready-made clothing	83	39	1 week	21,323	24,231	+13.6	267,476	325,237	+21.6
Iron and steel	142	92	½ month	130,071	154,418	+18.7	4,226,304	6,283,242	+48.7
Car building and repairing	80	42	...do	55,632	62,346	+12.1	1,648,783	1,999,897	+21.3
Cigar manufacturing	107	59	1 week	20,656	19,065	− 7.7	209,194	214,836	+ 2.7

Returns as to the number of employees working on the last full-time day of the reported pay period were made by only a part of the firms reporting the other items. The comparable figures for October, 1915, and October, 1916, appear in the next table.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN OCTOBER, 1915, AND OCTOBER, 1916.

Industry.	Establishments reporting for October both years.	Period of pay roll.	Number actually working on last full day of reported pay period in October—		Per cent of increase (+) or decrease (−).
			1915	1916	
Boots and shoes	17	1 week	13,435	12,751	− 5.1
Cotton manufacturing	29	...do	19,399	18,995	− 2.1
Cotton finishing	11	...do	6,981	7,055	+ 1.1
Hosiery and underwear	17	...do	11,796	12,034	+ 2.0
Woolen	41	...do	20,382	21,338	+ 4.7
Silk	36	2 weeks	11,706	12,525	+ 7.0
Men's ready-made clothing	13	1 week	3,326	3,376	+ 1.5
Iron and steel	78	½ month	103,704	126,162	+21.7
Car building and repairing	41	...do	48,798	53,926	+10.5
Cigar manufacturing	37	1 week	10,460	9,347	−10.6

Comparing October, 1916, with September, 1916, the figures of the next table show that 7 of the 10 industries added to the number on their pay rolls. The three exceptions were cotton manufacturing, men's ready-made clothing, and iron and steel. The reduction in cotton manufacturing and in iron and steel is very slight. More money was paid to employees in October, 1916, than in September, 1916, in all of the listed industries except cotton manufacturing, woolen, and men's ready-made clothing. The greatest reduction reported is 4.3 per cent in the men's ready-made clothing industry, an expected seasonal reduction. The greatest increase is 4.8 per cent, reported for both silk and car building and repairing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN SEPTEMBER, 1916, AND OCTOBER, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for September and October.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (−).	Amount of pay roll in—		Per cent of increase (+) or decrease (−).
				September, 1916.	October, 1916.		September, 1916.	October, 1916.	
Boots and shoes	85	63	1 week	48,501	48,591	+0.2	621,614	623,345	+0.3
Cotton manufacturing	89	50	...do	50,728	50,714	− (1)	494,275	474,061	−4.1
Cotton finishing	19	15	...do	11,078	11,099	+0.2	131,062	132,990	+1.5
Hosiery and underwear	82	55	...do	30,007	30,540	+1.8	290,009	300,025	+3.5
Woolen	56	44	...do	40,119	40,724	+1.5	481,678	468,940	−2.6
Silk	64	44	2 weeks	20,284	20,365	+0.4	456,627	478,450	+4.8
Men's ready-made clothing.	83	33	1 week	22,224	21,633	−2.7	306,713	293,520	−4.3
Iron and steel	142	93	½ month	153,067	152,830	−0.2	5,969,156	6,191,982	+3.7
Car building and repairing.	90	35	...do	57,339	57,986	+1.1	1,791,819	1,877,536	+4.8
Cigar manufacturing	107	51	1 week	16,272	16,635	+2.2	186,067	189,106	+1.6

[1] Less than one-tenth of 1 per cent.

In all of the industries named, except cotton finishing and men's ready-made clothing, more employees are reported as actually working on the last full day of the reported pay period in October, 1916, than in September, 1916. The figures for such establishments as reported this item are given in the table following:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN SEPTEMBER, 1916, AND OCTOBER, 1916.

Industry.	Establishments reporting for September and October.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (−).
			September, 1916.	October, 1916.	
Boots and shoes	20	1 week	12,637	12,830	+1.5
Cotton manufacturing	30	do	20,480	20,956	+2.3
Cotton finishing	10	do	6,731	6,717	− .2
Hosiery and underwear	15	do	11,302	11,593	+2.6
Woolen	41	do	30,681	31,345	+2.2
Silk	25	2 weeks	13,409	13,499	+ .7
Men's ready-made clothing	7	1 week	921	876	−4.9
Iron and steel	88	½ month	128,700	130,328	+1.3
Car building and repairing	34	do	48,920	49,665	+1.5
Cigar manufacturing	84	1 week	8,802	8,997	+2.2

RECENT CHANGES IN WAGE RATES.

The answers furnished by correspondents as to changes in wage rates in their establishments in the period September 15 to October 15, 1916, indicate that such changes have been few. In the many instances where no definite reply was received, it is probably safe to assume that no change in rates was made.

In cotton manufacturing increases are reported by 4 southern mills. One mill reports an increase of 5 per cent to the entire force, while the other 3 mills report an increase of 10 per cent, but do not state what proportion of the force received the increase. In cotton finishing slight increases are reported to a few employees in each of 2 mills. Increases are reported, mostly in special occupations, by five hosiery and underwear mills. In the silk industry an increase of 10 per cent to all employees is reported by 1 mill; increases to a portion of the force are reported by 3 other mills. In the woolen industry the only increase reported is one averaging 5 per cent to a little less than one-sixth of the force in 1 mill, all of those receiving such increase being females. Two establishments in the boot and shoe industry report increases in rates. In one case the increase was 5 per cent to all, and in the other instance the increase was made only in certain occupations. In the men's ready-made clothing industry 3 establishments report an increase of 10 per cent to a portion of the force, while 1 of these 3 also reports an increase of 5 per cent to another group of its employees. Only 1 increase—7 per cent to certain time-rate workers—is reported in the industry of car building and repairing. In cigar manufacturing 1 establishment reports an increase of 10 per cent to 61 per cent of the force, and another a very slight increase as affecting its entire pay roll. In the iron and steel industry there was an increase of from 3 to 5 per cent to all employees in 5 plants and an increase of 7 per cent to all in 6 plants. Six and one-tenth per cent increase to all is reported by 1 plant; another reports an increase of 7½ per cent to one-third of the force, and an increase of 5 per cent to the other two-thirds; 7½ per cent to one-fourth of the force and 5 per cent to the other three-fourths is reported by 1 establishment. Two establishments report an increase of 10 per cent; in one case the 10 per cent increase is general, while in the other the proportion of the force receiving it is not stated.

STRIKES AND LOCKOUTS, JANUARY TO OCTOBER.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the first 10 months of the year 1916 was 2,890. The number similarly compiled during the corresponding months of the year 1915 was 1,025.

The following table shows the number of strikes and lockouts begun in each of the months of 1916, together with 261 strikes and lockouts reported as having occurred during the 10-month period, although the month in which they began was not reported. The number of strikes compiled during the corresponding months of the year 1915 is also given. In comparing these figures, it must be borne in mind that, although the number of strikes in 1916 has undoubtedly been larger than those of the corresponding months of 1915, the sources of the bureau in obtaining data in regard to strikes have also increased, and the difference between the 2 years is therefore not so great as the figures would tend to show. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO OCTOBER, INCLUSIVE, 1916 AND 1915.

Kind of dispute.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Month not stated.	Total.
Strikes:												
1916	149	163	218	322	500	263	262	263	209	189	244	2,782
1915	50	45	75	91	111	54	95	138	147	102	....	908
Lockouts:												
1916	7	5	8	13	15	15	3	9	12	4	17	108
1915	13	12	14	16	11	6	14	9	15	7	....	117
Total:												
1916	156	168	226	335	515	278	265	272	221	193	261	2,890
1915	63	57	89	107	122	60	109	147	162	109	....	1,025

The above columns include disputes that began in the month indicated only and are subject to monthly revision. More detailed accounts of the disputes reported for each month preceding October may be found in former numbers of the Review.

DISPUTES REPORTED DURING OCTOBER, 1916.

The number of strikes reported during October shows a decrease in the number reported during any of the preceding six months. Probably the strikes that attracted the most attention were those of the street-car men in New York City and of the employees of the Standard Oil Co. at Bayonne. Other strikes of prominence were those of the miners in Pennsylvania, Oklahoma, and Michigan; the machinists in St. Louis, New York City, Boston, Baltimore, Portland, and Wilmington; the tailors of Minneapolis, St. Paul, and Cincinnati; the tobacco workers and stevedores of Porto Rico; the street-car men and dredgers of the Canal Zone; the street-car men at Albany and Springfield (Mo.); the ironworkers at San Francisco; the shipbuilders at Elizabeth (N. J.); the molders at Rochester (N. Y.); and the messenger boys, window cleaners, grocery clerks, cigar makers, neckwear makers, macaroni workers, and the hod carriers in New York City.

The data in the following table relates to 334 strikes and lockouts concerning which information was received by the bureau during the month of October. These include, in addition to the 193 strikes and lockouts which began in October, 132 strikes and 9 lockouts which were reported during October but began as follows: 59 strikes and 3 lockouts in September; 11 strikes and 3 lockouts in August; 5 strikes and 1 lockout in July; 6 strikes in June; 4 strikes in May; 8 strikes in April; 4 strikes in March; 4 strikes in February; 2 strikes in January; and 29 strikes and 2 lockouts the dates of commencement of which were not reported, but most of which probably occurred in September or October. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for September will show an increase over the number of strikes herein reported for that month.

Of the disputes reported during October, 24 strikes and 4 lockouts occurred east of the Mississippi and south of the Ohio and Potomac Rivers, 84 strikes and 2 lockouts west of the Mississippi, and the remaining 213 strikes and 7 lockouts in the district north of the Ohio and Potomac Rivers and east of the Mississippi. Nearly one-half of these strikes occurred in five States.

STATES IN WHICH FOUR OR MORE STRIKES AND LOCKOUTS WERE REPORTED DURING OCTOBER, 1916.

State.	Strikes.	Lockouts.	Total.
Pennsylvania	47		47
New York	32		32
Missouri	29		29
Massachusetts	26		26
Ohio	23	2	25
Illinois	18	1	19
New Jersey	16	2	18
Connecticut	17		17
California	12	2	14
Indiana	8		8
Washington	8		8
West Virginia	7	1	8
Porto Rico	7		7
Texas	7		7
Michigan	5	1	6
Arkansas	5		5
Maine	5		5
Delaware	4		4
Minnesota	4		4
Oklahoma	4		4
Oregon	4		4
Rhode Island	4		4
Wisconsin	3	1	4
16 other States	26	3	29
Total	321	13	334

The strikers were men in all but 15 strikes, which were confined to women; 12 strikes, which included both men and women; and 14 strikes and 1 lockout, in which the sex was not stated.

The industries in which 4 or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED DURING OCTOBER, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades	61	3	64
Miners	38		38
Building trades	34		34
Clothing	16	1	17
Teamsters	16		16
Textile workers	11	1	12
Street-railway men	9		9
Bakers	6	2	8
Tobacco workers	8		8
Waiters and cooks	8		8
Food handlers	7		7
Chemical workers	6		6
Glassworkers	5	1	6
Paper makers	5	1	6
Butchers and meat packers	5		5
Freight handlers	5		5
Longshoremen	5		5
Musicians and theater men	5		5
Shipbuilders	4		4
Steamboat men	5		5
Electrical workers	3	1	4
Stoneworkers	3	1	4
Miscellaneous	56	2	58
Total	321	13	334

Included in the above are 25 strikes of machinists, 16 of molders, and 6 of weavers.

In 206 strikes and 10 lockouts the employees were connected with unions; in 37 strikes they were not so connected; in 7 strikes and 2 lockouts they were not connected with unions at the time of striking but became organized during the course of the strike; in the remaining 71 strikes and 1 lockout it was not stated whether the men had union affiliation.

The following table shows the causes of 264 strikes and 6 lockouts, 57 strikes and 7 lockouts being due to miscellaneous causes or to causes not reported. In 66 per cent of these the question of wages or hours, or both, was prominent.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING OCTOBER, 1916.

Cause.	Strikes.	Lockouts.	Total.
For increase of wages	96		96
Because of reduction of wages	7		7
For decrease of hours	9		9
For increase of wages and decrease of hours	22		22
General conditions	14		14
Conditions and wages	10		10
Conditons and hours	1		1
Conditions, wages, and hours	4		4
Recognition of the union	20	3	23
Recognition and wages	12		12
Recognition and hours	1	1	2
Recognition, wages, and hours	5		5
Because of discharge of employees	16	1	17
Because of presence of nonunion men	23	1	24
In regard to agreement	8		8
Sympathy	4		4
Want foreman discharged	4		4
Jurisdictional	2		2
Wages unpaid	2		2
Recognition, conditions, and wages	4		4
Miscellaneous	8	3	11
Not reported	49	4	53
Total	321	13	334

In 162 of the strikes the number of persons involved was reported to be 83,643, an average of 516 per strike. In 21 strikes, in each of which the number involved was more than 1,000, the strikers numbered 54,900, thus leaving 28,743 involved in the remaining 141 strikes, or an average of 204 in each. In 3 lockouts the number reported to be involved was 42.

In 222 strikes and 10 lockouts only 1 employer was concerned in each disturbance; in 9 strikes, 2 employers; in 4 strikes, 3 employers; in 4 strikes, 4 employers; in 15 strikes and 1 lockout, more than 4; in 67 strikes and 2 lockouts the number of employers was not stated.

In 117 strikes reported as ending in October, 53 were won, 17 were lost, 32 compromised; in 1, the strikers returned to work under promise of the employer to arbitrate the matter in dispute; in 14 strikes the result was not reported. One lockout was reported as won by the employer. The duration of 86 of these strikes was given as follows: 1 day or less, 7; 2 to 3 days, 17; 4 to 7 days, 14; 1 to 2 weeks, 20; 2 to 3 weeks, 7; 3 to 4 weeks, 5; 1 to 2 months, 10; 2 to 3 months, 3; over 3 months, 3. The duration of the 83 strikes lasting less than 3 months was 1,312 days, or an average of 16 days each.

CANADIAN INDUSTRIAL DISPUTES INVESTIGATION ACT IN OPERATION.

The Canadian industrial disputes investigation act applies to coal mines and metal mines, public utilities, including municipal service corporations, and transportation of all kinds, including occupations subsidiary thereto, and makes it unlawful for employers in these industries and occupations to lock out their workmen or for employees to strike until an investigation of the dispute has been made and a report published by a board appointed for the particular case. The purpose of the act is to prevent and not prohibit strikes and lockouts; it does not aim at compulsory arbitration or to force men to work against their will after all chance of amicable settlement has disappeared. After the report of the board has been issued the parties may refuse to accept its findings and start a strike or lockout. This board is appointed, upon application by either side, by the minister of labor or his deputies, and consists of three members, one a representative of the employers, one representing the employees, and a third appointed by these two, or, if they fail to agree, by the Government. The board tries, by conciliation, to bring the parties to an agreement, and, if successful, reports its findings; if it is not successful, its report describes the conditions that caused the dispute, usually recommending what appear to be fair terms of settlement. If the parties in controversy are then unable to agree they may resort to the last measures of industrial warfare.

In this connection it may be well to note the fact that the Trades and Labor Congress of Canada, meeting in its thirty-second annual convention at Toronto, September 25–30, 1916, requested the repeal of the act.[1] On the other hand, the Canadian Federation of Labor, at its eighth annual convention at Quebec, September 8–10, 1916, adopted a report of the vice president generally approving the provisions of the act but recommending, as in the case of Australian and New Zealand legislation, that the enforcement of awards under it be made compulsory; that the act should be made applicable to all Government employees except those coming under the civil-service act, and to all industries instead of to public utilities only. It favored the suggestion that the word "strike" should be defined as applying to cases in which 50 per cent of the employees were concerned instead of 10 or more, as suggested in the amendment proposed by the minister of labor.[2]

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[1] See report of proceedings of the thirty-second annual convention of the Trades and Labor Congress of Canada, p. 132.

[2] See Labor Gazette, issued by the Canadian department of labor, October, 1916, p. 1687.

According to the recently issued report of the registrar of the boards of conciliation and investigation,[1] 17 disputes were dealt with under the industrial disputes investigation act during the fiscal year ending March 31, 1916,[2] the number of employees directly affected in 16 of these disputes being 8,439, and the number indirectly affected in 7 being 6,923. With these 17 cases a total of 191 disputes have been handled since the act became effective on March 22, 1907; boards were granted in 169 instances and threatened strikes were averted in all save 20 cases. One feature of the year's operations of the act is specially noted—the passing of an order-in-council making the provisions of the statute applicable to disputes in industries producing munitions of war, equipment of soldiers, the building and repairing of ships, and in supplying war materials of all kinds. This order, promulgated on March 23, 1916, is as follows:

> His Royal Highness the Governor General in Council is pleased, in virtue of the war measures act, 1914, to order that the provisions of the industrial disputes investigation act, 1907, other than section 63 thereof, shall specifically apply in the case of any dispute between employers and any employees engaged in the construction, production, repairing, manufacture, transportation, or delivery of ships, vessels, works, buildings, munitions, ordnance, guns, explosives, and materials and supplies of every nature and description whatsoever, intended for the use of His Majesty's military or naval forces or militia, or for the forces of the nations allied with the United Kingdom in the present war, if such dispute threatens to result in a strike or lockout.

It is recorded that as a result of this order no serious strike occurred during the fiscal year 1916 in any of the industries affected.

> The minister had become aware of the existence, at some points, of considerable underlying friction in these industries, and action on these lines was regarded as affording the most promising means of securing, without cessation of labor, the adjustment of differences which might arise.

Since the publication of the report for the fiscal year 1916, a statement has been made available through the courtesy of Hon. F. A. Acland, deputy minister of labor, showing the operations under the industrial disputes investigation act from its inception, March 22, 1907, down to October 18, 1916. From this statement it appears that the total number of boards of conciliation and investigation established under the act during this period was 182, and that of 212 cases in which application was made for the establishment of a board, 167 were reported upon by the boards; 29 were settled without the establishment of boards; 8 were settled while board was in process of constitution; 1 board was restrained by the court of review from proceeding with its investigation; 6 are being dealt with by boards at the present time; and 1 is being held in abeyance to permit of a probable settlement. The following table shows in summary form, by classes of industries affected, the results of the operation of the act down to October 18, 1916:

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[1] Canada, ninth report of the registrar of boards of conciliation and investigation of proceedings under the industrial disputes investigation act, 1907, for the fiscal year ending Mar. 31, 1916. (Being an appendix to the annual report of the department of labor for the same period.) Ottawa, 1916. 204 pp.

[2] For an account of the operation of this act from the date it became effective, Mar. 22, 1907, to Oct. 31, 1915. see MONTHLY REVIEW for January, 1916, pp. 23 to 28.

DISPUTES SETTLED UNDER THE CANADIAN INDUSTRIAL DISPUTES INVESTIGATION ACT, MAR. 22, 1907, TO OCT. 18, 1916, BY CLASSES OF INDUSTRIES AFFECTED.

[Information furnished through the courtesy of Hon. F. A. Acland, deputy minister of labor, Ottawa Canada.]

Industries affected.	Number of disputes referred under the act.	Number of strikes not averted or ended.
Mines and public utilities:		
Coal mines	44	6
Metal mines	15	5
Total	59	11
Railways	85	7
Street railways	27	2
Shipping	11	....
Commercial telegraphs	3	....
Telephones	2	....
Total	128	9
Light and power	4	....
Municipal work	9	1
Total	13	1
Industries other than mines and public utilities	12	....
Total, all classes	212	21

In the table following are shown the number of applications received under the act, the number of boards granted and the number of disputes in which strike was not averted or ended, for the calendar years 1907 to 1916, inclusive:

NUMBER OF APPLICATIONS RECEIVED, BOARDS GRANTED, AND DISPUTES WHERE STRIKE WAS NOT AVERTED OR ENDED, UNDER THE CANADIAN INDUSTRIAL DISPUTES INVESTIGATION ACT FOR THE CALENDAR YEARS 1907 TO 1916.

Item.	1907[1]	1908	1909	1910	1911	1912	1913	1914	1915	1916[2]	Total.
Number of applications	25	27	22	28	21	16	18	18	15	22	212
Number of boards granted	22	25	21	23	16	16	15	18	12	14	182
Number of disputes where strike was not averted or ended	1	1	4	4	4	3	1	1	1	1	21

[1] Nine months only.

[2] To Oct. 18.

The report for the fiscal year includes a statistical summary of the operations of the industrial disputes investigation act for each year since the inception of the act, March 22, 1907, and also a history of each application received during the fiscal year ending March 31, 1916.

PROPOSED CHANGES IN THE CANADIAN INDUSTRIAL DISPUTES INVESTIGATION ACT.

Modifications of the existing law are now under consideration by the Canadian minister of labor. In this revised draft, an effort has been made to meet objections which have arisen in connection with the operation of the law since 1907. One of the most important objects has been to prevent delays in the procedure for applications for boards and the elimination of the requirement of a costly strike ballot before an application for a board could be made. Under the present law 30 days' notice of intention to change wages or hours must be given, but the proposed law makes it clear that employees do not have to wait until the expiration of 30 days before applying for a board in respect of an intended change in wages or hours or other terms of employment, but may apply at any time after 10 days from the time notice is given. Further delay is sought to be prevented by reducing the time for granting or refusing a board from 15 to 10 days. If a board is refused, provided no industrial agreement is in effect and a strike vote has been taken, the employees may strike at once. In the proposed law a provision is also made for the interpretation or application of awards, which was entirely lacking in the original law, by authorizing the reconvening of a board to pass upon any disputed point. Where both parties agree to accept and abide by the recommendations of the board such recommendation shall be deemed to be an agreement between the parties. Under the present law the recommendation of the board may be made a rule of court. The option accorded in railway controversies of referring the dispute to the provisions of the railway disputes act of 1903, or the industrial disputes investigation act of 1907, is also eliminated, all disputes being brought under the proposed act. Important additions, in large measure borrowed from Australasian experience, are also made to the law. Among these, the most noteworthy are those making provision for the registration of industrial agreements, which shall not be effective for more than 5 years, and the requirement of a secret vote by ballot before a strike can be started. The leading changes and additions proposed, are thus summarized in the draft of the new measure which has been published by the Department of Labor of Canada.

In the bill now submitted for consideration endeavor has been made to remove a number of objections to the 1907 act and to remedy its defects, and a number of new provisions relating to industrial agreements, false representations, and other matters have been added.

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The unnecessary duplication of procedure in respect of railway disputes is removed, all such disputes being now brought under the one act. The main provisions respecting the appointment and proceedings of boards and the prohibition of lockouts and strikes are still, as heretofore, confined to public utilities and mining; but where both parties agree to the appointment of a board, such board may be appointed in respect of a dispute in any industry, whatever its nature. In long-continued or serious disputes in any industry, where neither of the parties applies for a board, the minister is given power to act on the application of any municipality interested or of his own motion and establish a board, or cause inquiry to be made in some other way.

The definitions and other parts of the 1907 act which have been found to be defective and inadequate have been redrafted and added to, much assistance in this respect being obtained from the Australian and New Zealand acts.

Endeavor has been made to make the procedure respecting applications for boards more simple and speedy, and it is provided that technical defects shall not invalidate applications, and that the establishment or proceedings of boards shall not be restrained or prohibited by the courts. It is not hereafter to be necessary to obtain authority for a strike before applying for a board.

A strike or lockout shall not, nor where application is made for a board within the time limited shall any dismissal, cause an employee to cease to be an employee for the purposes of the act.

Where any question arises as to the meaning or application of any recommendation of a board, the board may be reconvened to give its opinion or interpretation upon the point.

The provisions respecting notice of a change in wages or hours have been remodeled and made more comprehensive and effective, and the onus is put upon the party seeking to make the change of applying for a board where the other party does not consent to the change.

A secret vote by ballot is required to be taken before a strike.

Provision is made for registering industrial agreements, and lockouts or strikes in public-utility industries are forbidden where such agreements are in force, but either party may be relieved from the agreement by the report of a board.

The new measure proposed has not as yet been introduced into Parliament, and in order to avoid controversy may not be introduced until after the termination of the present European war.

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Reports to the Bureau of Labor statistics from approximately 725 retail dealers in 45 of the principal industrial cities of the United States show that the retail price of food as a whole advanced 3 per cent from September 15 to October 15. The price of beef and pork chops declined in price; pork chops, 6 per cent, or from 25.4 cents to 24 cents per pound. Smoked pork, however, made a slight advance.

All other articles, with the exception of tea, coffee, and rice, advanced in price from September 15 to October 15 from only the fraction of 1 per cent for hens to 11 per cent for eggs and 6 per cent each for butter, bread, and sugar.

The following table shows the average money retail prices and relative retail prices of food on September 15 and October 15, 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON SEPT. 15, AND OCT. 15, 1916.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price.		Relative price (average price for the year 1915=100).	
		Sept. 15, 1916.	Oct. 15, 1916.	Sept. 15, 1916.	Oct. 15, 1916.
Sirloin steak	Pound	$0.281−	$0.273−	110+	107+
Round steak	do	.255−	.246−	112−	108−
Rib roast	do	.218	.212	109−	106+
Chuck roast	do	.176−	.172+	109−	107−
Plate boiling beef	do	.130+	.129−	107−	106−
Pork chops	do	.254+	.240−	125−	118+
Bacon, smoked	do	.301−	.303+	110+	111−
Ham, smoked	do	.302+	.302+	117−	117
Lard, pure	do	.186+	.194−	126−	131+
Hens	do	.244−	.244−	117−	117+
Salmon, canned	do	.204	.206	102−	103−
Eggs, strictly fresh	Dozen	.405+	.449−	121	134−
Butter, creamery	Pound	.396+	.421+	110−	117−
Cheese	do	.256+	.268−	111−	116+
Milk, fresh	Quart	.093−	.095+	103	106+
Bread	16-oz. loaf[1]	.062+	.065+	109−	115+
Flour, wheat	⅛-bbl. bag	1.174−	1.234+	117+	123+
Corn meal	Pound	.033−	.034−	104	108+
Rice	do	.091−	.091−	100+	100+
Potatoes	Peck	.415−	.424−	181−	185−
Onions	Pound	.045+	.047−	132+	136−
Beans, navy	do	.119+	.121−	155+	157+
Prunes	do	.131+	.133−	99+	100−
Raisins, seeded	do	.129+	.131−	103−	104−
Sugar, granulated	do	.077+	.082−	117+	124+
Coffee	do	.302−	.302−	100−	100−
Tea	do	.551+	.551+	100+	100+
All articles combined				116+	119+

[1] 16 ounces (weight of dough).

Another table shows the average retail prices and relative retail prices of food on October 15 of each year from 1912 to 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON OCT. 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of October in each year was of the average price of the year 1915.]

Article.	Unit.	Average money price Oct. 15.					Relative price Oct. 15 (average for the year 1915=100).				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak	Pound	$0.240−	$0.255+	$0.260+	$0.260+	$0.273−	94−	100+	102+	102−	107+
Round steak	...do	.203−	.230−	.237−	.230−	.246−	89+	101−	104−	101+	108−
Rib roast	...do	.188	.200	.204	.202	.212	94+	100−	102+	101	106+
Chuck roast	...do			.172+	.163−	.172+			107−	101−	107−
Plate boiling beef	...do			.128−	.122−	.129−			105−	100−	106−
Pork chops	...do	.222−	.226−	.232−	.232−	.240−	109+	111+	114−	114+	118+
Bacon, smoked	...do	.265+	.281+	.290−	.279−	.303+	97−	103	106+	102−	111−
Ham, smoked	...do	.251−	.271+	.279−	.261−	.302+	97−	105+	108+	101+	117
Lard, pure	...do	.160−	.160−	.155+	.144−	.194−	108	108+	105+	97+	131+
Hens	...do	.200−	.212+	.214+	.206+	.244−	96+	102+	103−	99+	117+
Salmon, canned	...do				.200	.206				100+	103−
Eggs, strictly fresh	Dozen	.385+	.409−	.385+	.395+	.449−	115−	122+	115−	118+	134−
Butter, creamery	Pound	.378+	.385	.378+	.353−	.421+	105−	107−	105+	98	117−
Cheese	...do				.229−	.268−				99−	116+
Milk, fresh	Quart	.090	.092−	.092−	.090	.095+	100−	102−	102−	100+	106+
Bread	[1] 16-oz. loaf			.052−	.056+	.065+			91+	99−	115+
Flour, wheat	⅛-bbl. bag	.823−	.793−	.883−	.903−	1.234+	82+	79+	88+	90+	123+
Corn meal	Pound	.030+	.030−	.032−	.031−	.034−	96	95+	101−	99+	108+
Rice	...do				.091−	.091−				100−	100+
Potatoes	Peck	.234−	.273−	.229+	.243−	.424−	102−	119	100+	106−	185−
Onions	Pound				.032+	.047−				94−	136−
Beans, navy	...do				.078−	.121−				101+	157+
Prunes	...do				.131+	.133−				99	100−
Raisins, seeded	...do				.126−	.131−				100+	104−
Sugar, granulated	...do	.061−	.055+	.073−	.061+	.082−	92+	84−	110−	93−	124+
Coffee	...do				.302−	.302−				100−	100−
Tea	...do				.551+	.551+				100+	100+
All articles combined							98−	102+	104−	103	119+

[1] 16 ounces (weight of dough).

Each article for which prices are shown from 1912 to 1916 was higher on October 15, 1916, than on the same date of the four years preceding. For all articles combined the increase in price from October 15, 1912, to October 15, 1916, was 21 per cent.

From October 15, 1915, to October 15, 1916, the price of tea and coffee was the same, and all other articles advanced from a fraction of 1 per cent for rice to 75 per cent for potatoes and 55 per cent for beans. The increase in the price of all articles combined from October 15, 1915, to October 15, 1916, was 16 per cent.

REPORT ON THE MONTANA WORKMEN'S COMPENSATION ACT.

The first annual report of the operation of the Montana workmen's compensation act,[1] covering the 12 months ending June 30,

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[1] Montana. Industrial accident board. First annual report for the 12 months ending June 30, 1916. [Helena, 1916.] 294 pp.

1916, includes much of the information and material, greatly amplified, contained in the report[1] issued on October 1, 1915, covering the first three months of the act. The report under review gives in detail the financial condition of the board, including statements of the administrative expenditures and claims requiring payment of compensation. It also shows in condensed form a small portion of the statistical data gathered by the board, classified according to industry, plan of compensation elected,[2] and the extent and nature of the injuries suffered by workmen. Preceding this statistical information the report discusses compensation laws in general and draws a comparison between the Montana law and those of other States. "The first year's experience under the law has demonstrated its efficiency. It has afforded certain and prompt pecuniary relief without any recourse to never-ending, trouble-making litigation." Some adverse criticism of the schedule of compensation and the inadequacy of awards based on 50 per cent of the employee's wages and objections to the two weeks' waiting period are noted, followed by a brief outline of the operations under the three plans of insurance.

Although the Montana law is elective, the report states that fully 98 per cent of the employers who employ five men or more, and 96 per cent of all workmen in the State are subject to its provisions. It is estimated that 60,000 workers are employed in hazardous occupations. According to the report 65 firms, employing 22,185[3] workers, were accepted under the first plan, and during the year they paid out in compensation, including 50 lump-sum death settlements and 105 burial expenses, $244,625.43. The claims awaiting settlement under this plan are estimated at about $69,000, making a total compensation liability of $313,625.43. Computed on an estimated pay roll of $50,000,000[4] this would indicate a total cost to employers of approximately 0.63 per cent.

Under the second plan 1,000 applications were accepted, representing 15,063[5] employees. During the year 13 insurance companies carrying these risks paid out in compensation, burial, medical, and hospital expenses, $42,470.63. It is estimated that $25,200 would be required to liquidate pending claims, which would make a total of $67,670.63 as the amount necessary to cover the total liability for compensation cost under this plan. Computed on an annual pay roll of $20,000,000 [1] this indicates an actual accident cost of about one-third of 1 per cent.

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[1] A digest of this report was published in the MONTHLY REVIEW for February, 1916, p. 67.

[2] These plans were described in the digest referred to in note 1. The first plan, sometimes called "self-insurance," allows the employer, upon satisfying the board as to his solvency, to pay the compensation due the injured directly to him, or in case of death, to his beneficiaries. Under the second plan the employer shall insure his risk with some insurance company authorized to do business in the State, which company shall pay the compensation to the injured employee. The third plan is called State insurance. It provides that the employer shall pay a certain rate of premium on his pay roll into the State industrial accident fund and that an injured employee shall be paid directly from this fund.

[3] This is the number reported in 1914. The board estimates the total number during the year covered by the report at about 40,000.

[4] It is explained that the pay-roll reports received by the board do not cover the present year, but date back in the majority of cases to 1914, when the total pay roll was over $32,000,000.

[5] This is the number reported in 1914. The board estimates the total number during the year covered by the report at 20,000.

It appears that only 453 employers, with 6,521 employees, are operating under the State insurance plan, and that the State has paid out in compensation of all kinds $6,303.35, with pending claims aggregating about $906.29, making a total liability for the year of $7,209.64. This, computed on the yearly pay roll, namely, $2,950,313.93, indicates an accident cost of less than one-fourth of 1 per cent (0.24) of the annual pay roll. According to the report, only two assessments were levied against these firms during the year at a total cost to employers of a little more than one-half of 1 per cent on their annual pay rolls, "which perhaps represents as low an annual insurance cost to employers operating under compensation laws as exists anywhere in the world. Yet, despite this low premium cost, a surplus of $22,684.56 has been accumulated in the fund which represents three times the amount that has been paid out."

During the year 6,802 accidents were reported, of which 136 were fatal, 3 resulted in permanent total disability, 89 in permanent partial disability, 6,574 in temporary disability. Of this latter number 1,431 [2] received compensation and 5,145 [2] returned to work before the expiration of the two weeks waiting period, receiving, therefore, only the medical and hospital attendance provided by the law. The amount paid out in burial expenses in the 136 fatal cases was $8,590.90, and in 78 of these cases compensation was paid amounting to $169,111.30. To 89 cases of permanent partial disability, compensation to the amount of $26,198.14 was paid; to the 1,431 employees temporarily disabled, compensation to the amount of $69,954.53 was paid, on account of incapacity or loss of time. In three permanent total disability cases compensation to the amount of $7,694 was paid. For medical and hospital services there was a total of $11,850.54 paid out. The following table shows the payments made for the purposes indicated under each specified plan of insurance:

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[1] It is not stated whether this amount is based upon reports received or is estimated.

[2] This is taken from the report. Added to the other figure, it does not total 6,574.

PAYMENTS MADE FOR THE PURPOSES INDICATED UNDER EACH SPECIFIED PLAN OF INSURANCE, FOR THE YEAR ENDING JUNE 30, 1916.

Plan.	Compensation.	Fatal.	Medical.	Hospital.	Burial.	Total.
First	$71,741.68	$160,891.06	$3,021.98	$1,804.81	$7,165.90	$244,625.43
Second	27,216.64	8,220.24	4,571.14	1,037.61	1,425.00	42,470.63
Third	4,888.35		1,185.70	229.30		6,303.35
Total	103,846.67	169,111.30	8,778.82	3,071.72	8,590.90	293,399.41

Of the 6,802 accidents, 4,391 came under plan 1, 2,236 under plan 2, and 175 under plan 3. Ninety-seven, or 71.3 per cent of the fatal accidents, and 4,714, or 71.7 per cent of the accidents causing temporary total disability, occurred in mines. Of the accidents resulting in temporary total disability, the largest number, 2,402, or 36.5 per cent, are classified as contusions and bruises, while 2,133, or 32.4 per cent, are classified as lacerations. The total time lost on account of all accidents, not counting the number killed or those whose earning capacity was reduced, was 65,910 days, representing an estimated wage loss of $261,443.52.

The report emphasizes the economy with which the act has been administered during the year, and states that of the original $50,000 appropriated by the State to cover a period of two years, at least $14,000 will be returned to the State treasury at the end of the biennium. The following financial statement is included:

Assets.		*Liabilities.*		
Industrial fund	$21,171.51	Premium income	$32,821.43	
Investment fund (registered warrants)	3,122.43	Less uncollected	2,927.13	
Administrative fund	42,593.25	Collections		$29,894.30
Compensation	6,303.35	Administrative income	3,355.70	
Administrative expense	25,426.76	Less uncollected	100.95	
Refunds	840.44	Collections (inspection fees)		3,254.75
Bonds and securities (deposited for plan 1)	149,800.00	Industrial fund warrant account		1,609.28
Furniture and fixtures	855.40	Administrative fund warrant account		15,589.81
Adjustments	70.00	Appropriation		50,000.00
		Bonds and securities in trust		149,800.00
		Special deposits		35.00
Total	250,183.14	Total		250,183.14

A table is given showing that under plan 3, 171 firms, with pay rolls amounting to $2,950,313.93, contributed $29,158.86 to the State fund.

ACCIDENTS IN THE GAS INDUSTRY.

The report of the committee on analysis of accidents in the gas industry,[1] submitted at the eleventh annual meeting of the American Gas Institute in October last, gives a record of 10,000 accidents, 3,763 of which were reported during the past institute year by 104 companies in 30 States. Of the 10,000 cases 27 were fatalities. By combining the analyses for the two institute years ending September 1, 1916, the report announces that—

> Of the 6,499 cases reported during the two years 5,283 reported on disability, and of that number 2,286, or 43 per cent, reported disabilities amounting in all to 25,036 days, being an average of 10.9 day's disability per case, and in 2,997 cases, or 57 per cent, it was reported that no disability resulted. Of the 2,286 cases of disability it was found that 478 (20.9 per cent) showed periods of disability of over two weeks each and involved a total disability of 13,346 days, being an average of 27.9 day's disability per case. It is also interesting to note that of 4,325 cases reported during the two years on length of service, 1,946, or 45 per cent, of the employees injured had been in the company's employ one year or less. During the two years' period, 6,362 reports indicated the age of the injured employees, which showed the average age to be 33 years.

The following table gives the analysis of the 10,000 cases by causes:

ANALYSIS OF 10,000 ACCIDENTS IN THE GAS INDUSTRY, BY CAUSES.

[The report does not give the numbers shown here, but they were furnished through the courtesy of the chairman of the committee, Mr. James B. Douglas.]

Cause of accident.	Nonfatal.		Fatal.		Total.
	Number.	Per cent.	Number.	Per cent.	
Leak of gas outside	133	1.33	4	14.81	137
Leak of gas inside	88	.88			88
Animal bites	195	1.96			195
Machinery in operation	323	3.24	2	7.41	325
Elevators, etc	169	1.69	2	7.41	171
Explosions, ignited gas, etc	265	2.66	3	11.11	268
Falling in or through openings	449	4.50	3	11.11	452
Hot material	489	4.90	1	3.70	490
Objects, hanging or swinging	96	.96			96
Objects, protruding	421	4.22			421
Objects, falling	1,035	10.38	2	7.41	1,037
Flying particles	872	8.74			872
Vehicles, etc	919	9.21	5	18.52	924
Nails, wires, etc	620	6.22			620
Handling material	1,057	10.60	1	3.70	1,058
Slipping or tripping	866	8.68			866
Hand tools used by injured	1,235	12.38			1,235
Hand tools used by others	189	1.90			189
Miscellaneous	552	5.53	4	14.81	556
Total	9,973	100.00	27	100.00	10,000

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[1] Report of committee on analysis of accidents, presented at the eleventh annual meeting of the American Gas Institute, October, 1916. [American Gas Institute, 29 West Thirty-ninth Street, New York.] 6 pp.

In a statement of the effect of these accidents it is shown that 67.2 per cent are classed as lacerations or contusions, 8 per cent as burns, 5.4 per cent as fractures, 8.6 per cent as eye injuries, 8.1 per cent as strains, etc., and 2.8 per cent as illness caused by gas. The report states that the work on analyses of accidents from year to year done by the several committees has been of real value and has been used on a number of occasions to prove that the gas industry can not be properly classified as extrahazardous.

> It will be noted that accidents peculiar to the industry, i. e., leak of gas (outside and inside) and explosions, constituted but 4.9 per cent of the 10,000 cases reviewed. This being positive evidence, should prove convincing to any State body or insurance committee having to do with casualty ratings for the industry.

The committee recommends that this work be continued and that the president of the institute urge the members to make better response to the committee's requests for reports of accidents.

WORKMEN'S COMPENSATION CASES IN THE UNITED STATES SUPREME COURT.

On Monday, November 13, the Supreme Court ordered a reargument of a number of cases named below affecting the validity and construction of the compensation laws of Iowa, New Jersey, New York, and Washington. The Iowa case (Hawkins *v.* Bleakley) came up from a district court of the United States, while the others were cases from the State courts.

The Iowa case was decided June 22, 1914, and the validity of the compensation law of that State was upheld against contentions of its unconstitutionality as depriving of liberty of contract, due process of law, and right of trial by jury, the court saying that these could be waived by the parties in interest, either expressly or by common consent or acquiescence. The provisions abrogating the common-law defenses, arranging for arbitration by the industrial commissioner of the State, and arranging for the insurance of the employer's liabilities under the act were also upheld.

The point involved in the New Jersey case (Erie Railroad Co. *v.* Winfield, Jan. 6, 1916) is the applicability of the State compensation law to injuries received in interstate commerce where there is neither allegation nor proof of negligence on the part of the railroad company. The court of errors and appeals of the State held the law applicable, while the company contended that the Federal law alone controls where the injury is received in interstate commerce. The contentions are identical in one of the New York cases (New York

Central & Hudson River Railroad *v.* Winfield, May 7, 1915), the court of last resort of that State taking the same view as the courts of New Jersey.

In Southern Pacific Co. *v.* Jensen (July 13, 1915), the same New York court held the State law to apply where there was interstate commerce by steamship; while in Clyde Steamship Co. *v.* Walker (July 15, 1915), this court held the compensation law available as an alternative remedy with that afforded by admiralty law. Still another case (New York Central & Hudson River Railroad *v.* White) is included in the order for reargument, coming up from the New York Supreme Court, appellate division, but no report of this case appears in the sources at hand.

The Washington case (Mountain Timber Co. *v.* State of Washington, Oct. 6, 1913) was brought from the supreme court of that State, it having been put forward as a test case. The points involved are the general ones of the due process of law, depriving of the right of trial by jury, and unlawful search and seizure. However, inasmuch as the law is compulsory in form, thereby differing from that of Iowa, the question of voluntary waiver can not be argued, as was done in that case, and the decision will be of correspondingly greater interest in view of the position taken by some courts that while voluntary acceptance of an elective law makes such provisions legal, a compulsory establishment of them would not be.

No date was set for the reargument.

DEMAND FOR EXTENSION OF STATE WORKMEN'S COMPENSATION LAWS TO COVER PAINTERS, DECORATORS, AND PAPER HANGERS.

The interest which is being manifested in one of the topics to be considered at the forthcoming Conference on Social Insurance is shown somewhat strikingly in a recent letter from one of the most prominent trade-union leaders. Mr. J. M. Skemp, grand secretary-treasurer of the Brotherhood of Painters, Decorators, and Paperhangers of America, under date of October 26, 1916, writes as follows:

> If we are unable to have a delegate from the brotherhood in attendance, I trust that the attention of the conference will be drawn to the illogical and indefensible numerical restrictions in the laws of Alaska, Colorado, Connecticut, Kansas, Nebraska, Rhode Island, Vermont, Texas, Ohio, and Wyoming. In none of these States is compensation provided for accidents to men working in establishments in which less than a given number, usually five, of workmen are employed. This greatly lessens the value of these laws to the men engaged in the painting industry. Not less than 50 per cent of the 87,000 members of the brotherhood work in shops that employ less than five men. The economic loss and the need for compensation for the injury or death of a workman employed

in a small establishment are as great as in the case of an injury or death of a workman employed in a large establishment. In no way can the restriction be justified.

In addition to our interest in this particular provision which so directly affects the men of our trade, we believe that workmen's compensation laws should be compulsory; that State insurance should obtain to the exclusion of casualty-company insurance, self-insurance, or insurance through employers' mutual associations; that compensation should be paid from the commencement of the disability; that it should be more liberal than so far provided; and that in the case of permanent disability it should continue for life and in case of death be paid to the widow for life or until remarriage and to the children until 18 years of age. Surgical and hospital service should also be provided for.

We are also greatly concerned in the provision of compensation for disability due to occupational disease. Many men employed in the painting industry become partially or totally disabled through lead poisoning. Their loss is as great, their need as urgent, as if their disability were caused by a fall or some other accident.

The rapid progress that is being made in social insurance is wonderfully encouraging. It should inspire us to further and greater effort.

INDUSTRIAL HYGIENE AT THE MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

Fatigue, efficiency, insurance, and the effect of certain industrial poisons were the subjects primarily claiming the attention of those who addressed the industrial hygiene section of the convention of the American Public Health Association held in Cincinnati, October 24 to 27. The scientific aspect was discussed by C. E. A. Winslow, of Yale University, and Dr. F. S. Lee, of Columbia University. Prof. Winslow, in a paper entitled "The Effect of Air Conditions on Fatigue and Efficiency," referred to experiments of the commission on ventilation, which showed that actual physical changes of an abnormal character occur when the temperature rises from 68° to 86° and that there is a marked loss of efficiency resulting in the falling off of production at the higher temperature. Dr Lee in his paper "Is the Eight-hour Day Rational?" maintained that since some occupations are more fatiguing than others the length of the workday should not be the same for all, and that if the work demanded of a man in one day is beyond his physical powers the day should be shortened. Observation of workers is necessary before the question as to the length can be determined.

"Scientific Management and Its Relation to the Health of Workers" was the title of a paper by Richard A. Feiss, the Clothcraft Shops, Cleveland. Based upon a large experience with efficiency methods, Mr. Feiss stated that the introduction of such a system had resulted in a reduction of the labor turnover and that under scientific management there is an increase in the health and happiness of workers.

John P. Frey, International Molders' Union, Cleveland, Ohio, discussed "The Relation of Scientific Management to Labor," contending that scientific management fosters speed and monotony and, as practiced, increases fatigue.

The symposium on industrial health insurance, while not carried out as arranged, developed into a general discussion, in which the principle of health insurance was, on the whole, indorsed, although some of the speakers took occasion to emphasize particular features regarded as important in the measure being urged by the American Association for Labor Legislation. Among these are the need for preventive medicine, some way of inspiring negligent communities and negligent employers to increased effort in providing for workers, and the importance of protecting the rights of injured sick men so that they may receive as good if not better service than they do now. Dr. William C. Woodward, Washington, D. C., urged the importance of care in the selection and supervision of competent physicians in each insurance unit. Dr. Otto P. Geier, Cincinnati, thought it inadvisable to enact health insurance legislation without further and careful study lest the mistakes of the British and German systems be duplicated. Dr. Sidney McCurdy, Youngstown, Ohio, favored compulsory health insurance. Dr. John B. Andrews, of the American Association for Labor Legislation, seemed to think that indirectly the proposed bill would have the effect of bringing the careless employer into line, and in this opinion he was indorsed by Dr. Meeker, of the United States Bureau of Labor Statistics. Dr. Andrews also held that supervision of medical work should be in the hands of physicians directly responsible to those who control the fund and not given over to public health officials.

The third session of the industrial hygiene section was held in conjunction with the section on sociology. Papers were read on "The Relation of the United States Department of Labor to Industrial Hygiene," by Royal Meeker, Commissioner of the United States Bureau of Labor Statistics; "The Relation of the Public Health Service to Problems of Industrial Hygiene," by Dr. J. W. Kerr, United States Public Health Service; "The State and Industrial Hygiene," by Dr. E. R. Hayhurst, Ohio State University; "The Municipality and Industrial Hygiene," by Dr. Louis I. Harris, New York City Health Department.

Two sessions were devoted to a discussion of industrial toxemias, covering the following industrial poisons: Carbon monoxid poisoning; benzol and allied compounds; volatile poisons and high explosives; carbon dioxid; lead poisoning; gasoline-engine gas poisoning;

aniline poisoning; mercurial poisoning; and metal alcohol poisoning. "Dermatitis in the Manufacture of High Explosives," "Modern Chemical Industries and Public Health," "The Physical Examination of Employees in the Cement Industry," "Bleach Powder Chambers," and "The Dangers Connected with the Spray Method of Finishing and Decorating" were the subjects of other papers.

Summaries of the more important papers will be presented in a later number of the MONTHLY REVIEW.

DETERMINATION OF THE CONSEQUENCES OF INDUSTRIAL ACCIDENTS IN AUSTRIA.[1]

BY FERDINAND SCHNITZLER.

LEGAL PROVISIONS AS TO MODE AND AMOUNT OF COMPENSATION OF INJURED PERSONS.

The compensations of the workmen's accident insurance in Austria consist chiefly in pensions governed by the computable annual earnings which, except in the case of railroad employees, are as a rule limited to a maximum of 2,400 crowns ($487.20)—i. e., any amount in excess is not considered in computing the pension. The principal provisions for the compensation of injured persons, as contained in article 6 of the law of 1887, are the following:

> The compensation in case of physical injury shall consist in the granting of a pension to the injured person for the duration of the disability, this pension to begin with the commencement of the fifth week after the occurrence of the accident.
>
> The pension shall consist—
>
> (*a*) In the case of total disability, for the duration of the same, of 60 per cent of the annual earnings; and
>
> (*b*) In the case of partial disability, for the duration of the same, of a fraction of the pension determined under (*a*), to be computed according to the degree of remaining earning capacity, but never to exceed 50 per cent of the annual earnings.

The law of 1894 extended accident insurance also to the railroads, and the compensation of workmen and officials in the operating departments was regulated in a different manner, so as to favor railroad employees. In the first place, the above-mentioned limitation of the computable amount of annual earnings is not applicable to them, and, secondly, Article VII, paragraphs 4 and 5, provides with respect to the computation of the pension as follows:

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[1] Translation from "Oesterreichische Zeitschrift für öffentliche und private Versicherung," Vol. V, Nos. 1 and 2, Wien, 1914, pp. 197ff. This article was prepared for presentation at the Congress on Social Insurance, which was to be held in Paris in September, 1914, but was abandoned on account of the war. The author is director of the Workmen's Accident Insurance Institute for Moravia and Silesia and professor in the Technical Institute at Brunn.

> Railway employees who are insured either under Article I [1], or Article V, and Government employees insured according to Article V, who, under the conditions of the road's charter or other existing regulations, are entitled to free transportation, are not under the application of the provisions of the law of March 5, 1869 (*Reichsgesetzblatt* No. 27), if under this act they have a right to compensation apart from the provisions of articles 46 and 47 of the law concerning accident insurance.
>
> Nevertheless, in case the aforementioned persons or their survivors have a right to claim compensation under the law of March 5, 1869 (*Reichsgesetzblatt* No. 27), the pension provided for the injured person by the accident insurance law shall be increased one-half and in case of permanent disability it shall be increased still more according to circumstances; nevertheless, it shall not be more than double the amount provided for by the insurance law; that is, 120 per cent of the full annual earnings. The pension allowed to dependents shall be increased two-thirds.

The above-mentioned law of March 5, 1869, is the so-called railroad liability law.

The other laws relating to accident insurance of workmen do not contain any different provisions as to the amount of the compensation of injured persons.

The law does not give to the injured person the right to demand a lump-sum settlement for the entire pension or for part of it. The insurance institutes are, however, authorized to pay to injured persons who are Austrian subjects the capitalized value of their pension, provided the injured person and the commune obligated to grant him poor relief consent to this form of settlement. Compensation claims of foreigners may without their consent be settled with proportionate lump-sum payments. Several insurance institutes have adopted the practice of offering lump-sum settlements for small pensions whenever the decrease in the earning capacity is not important, and compensation by means of the capitalized value seems more advantageous for the injured person than the payment of a small pension, from which as a rule no economic effect may be expected. However, compensation by means of a pension is the rule.

LEGAL PROVISIONS FOR THE DETERMINATION OF THE COMPENSATION.

Paragraphs 2 and 3 of article 33 of the law of 1887 provide as follows:

> If insured persons are physically injured as the result of an accident the determination of the pension due them in accordance with article 6 must be effected after the lapse of four weeks after the occurrence of the accident for those injured persons who at that time are still entirely or partially disabled.

In the case of those injured persons who after the lapse of four weeks are still under medical treatment in order to effect a cure of the injuries suffered, the determination of the compensation shall at first be limited to the pension payments to be made until the termination of the medical treatment, subsequent amounts payable to be fixed after such termination.

Article 36 of the same law says:

The insurance institute must render to the person entitled to compensation a written decision as to the compensation awarded on the initiative of the institute or on application of the claimant. This decision must show the amount of the compensation awarded and the method of its computation. In the case of disabled persons this decision must show whether total or partial disability has been determined.

Disallowance of a claim to compensation must also be effected by written decision.

Article 39 of the same law contains the following provisions as to later occurring changes in the determination of the compensation.

If important changes occur in the conditions which were decisive for the determination of the compensation, a new determination of the latter may be effected by the insurance institute either on application or on the institute's own initiative. * * *

An increase of the determined pension may only be claimed for the period after application for an increased annuity.

A decrease or discontinuance of the determined pension becomes effective with the date on which the decision decreeing it is transmitted to the person entitled to compensation. An appeal against this decision to the arbitration court does not act as a stay.

DECISION OF APPEALS OF DISAPPROVED CLAIMS—ARBITRATION COURTS.

The compensation is determined in the insurance institute by officials designated in its by-laws. A court of arbitration maintained by each insurance institute is exclusively competent for the decision of claims for compensation which have been disapproved by the institute. Claims for compensation may be appealed to this court within a year after transmission of the decision of the institute. The court of arbitration renders its decisions through so-called senates, composed of a judge of a court of higher instance and four associate members. Two of the latter must be persons of technical training and are appointed by the minister of the interior after consultation with the ministers interested; the other two are elected, one by the employers of the insured establishments and the other by the insured persons from among themselves. No member of the court of arbitration may be a member of the board of directors or hold any other position in the insurance institute. The Austrian courts of arbitration are therefore courts composed of laymen presided over by a judge. The decisions of the court of arbitration are final. Legal means or appeals against decisions of the court are not permissible. A higher appellate body common to all insurance institutes, such as the German Imperial Insurance Office, does not exist in Austria.

BASIS FOR COMPENSATION OF INJURED PERSONS: DECREASE IN EARNING CAPACITY—DETERMINATION OF CONSEQUENCES OF THE ACCIDENT.

Decrease in the earning capacity caused by an industrial accident is the basis and occasion for compensation of an injured person.

Neither the Austrian law of 1887 nor the German accident insurance law of July 6, 1884, after which it was patterned, contain any provisions defining the term "earning capacity," nor as to when total disability is to be assumed, nor by what standard the decrease in earning capacity is to be measured, nor does the law authorize the Government to issue such provisions by administrative decree. Subsequent laws have not made any change in this respect.

In Austria, therefore, there are no binding provisions for the valuation of the decrease in earning capacity, such as are contained in the laws of some foreign countries or have been decreed by legally authorized administrative decrees, nor is there a central authority, such as the German Imperial Insurance Office, which controls the application of the law in the entire territory subject to it and thereby guarantees its uniform interpretation. Consequently it is not surprising that a uniform compensation practice has not so far developed in Austria, although compulsory accident insurance has been in force there for a quarter of a century.

In theory it can be considered as undisputed that it is not the bodily injury in itself which is to be the basis for the award of compensation, but its injurious effects upon the earning capacity of the victim; not the injury of parts of the body or of the organs of sense, nor the lessening of the physical and mental capabilities of the victim in themselves, but the injury suffered by the affected person in his ability to earn a living. From this fundamental conception it not only follows that entirely like injuries of the body or its functions must be valued differently in different persons, but also that in the meaning of the law one and the same person may in case of a single injury be entitled to different compensations at different times. Even the experiences of every day life teach us that one and the same infirmity may, in a varying measure, according to the age, sex, occupation, and other characteristics of the person affected, influence his earning capacity; also that in many instances the affected person may gradually diminish the injurious influence of the infirmity upon his earning capacity until this influence is finally not felt at all. In mentioning this we do not have in mind those instances in which the affected person takes to another occupation, in which his infirmity is no longer a hindrance because the injured part of the body is not made use of at all or only in a small measure, nor those instances in which the lost part of the body has an artificial substitute (*a prosthesis*). What we have in mind are those cases in which the equalization has been effected by greater use of a part of the body which has been less used before the accident, by a changed bodily posture, or in a similar manner. We may, therefore, speak only of a determination of the consequences of an accident in the proper meaning of the term if the victim, notwithstanding the infirmity caused by the accident, is without the aid of an artificial substitute able to follow the same industrial occupation as before the occurrence of the accident.

If one keeps in mind that accident insurance is an insurance against damages (*Schadenversicherung*), and that the law in its wording and spirit considers as damage to the injured person the diminished earning capacity caused by the accident, one can hardly entertain any doubt that adjustment to the consequences of the accident may form a reason for reducing the pension, even if the medical examination shows no change in the condition of the injury.

The question as to whether the fact that an injured person, although visibly injured, is able to perform without inconvenience the same work as before the accident and earns the same wages as a physically perfect workman of the same occupation, does in itself justify the assumption that he has not suffered any damage, must, from a theoretical point of view, be answered in the negative. It must above all be kept in mind that according to the law the decreased earning capacity is the damage to be compensated and not the diminished capacity to fill a specified occupation. Just as we do not award the highest possible pension to an injured workman for the simple reason that he has become incapacitated for the occupation exercised before the accident, but demand of him with right that he should seek employment in some other occupation still open to him, so it should not be asserted that an injured person who is able to continue in his former occupation at the same rate of wages has not suffered any damage at all, even though other opportunities for occupation have through the consequences of the accident been closed to him. This consideration is of more than theoretical importance.

In taking into account the enormous changes in the technical processes which occur in rapidly increasing sequence, one must in the case of each "skilled" workman figure with the possibility that a day may arrive when he will no longer be able to put his acquired skill to use and will be forced to learn some new trade. Consequences of accidents which in his original occupation he was able to overcome quickly and to which he could adjust himself may be of great hindrance to him in a change from his former occupation to a new one. In addition, it should be kept in mind that organs which may be used as substitutes, in a sense, in the case of injury to other organs, may themselves be injured through accident or sickness, outside of industrial employment, in such a manner that the earning capacity of the affected person is essentially lessened without giving rise to a claim for compensation. This relation becomes most evident if one considers the loss of an eye. It is a well-known fact that numerous one-eyed workmen are able to perform their usual work just as well as workmen with two sound eyes. If, however, the visual capacity of a one-eyed workman becomes lessened, it is, of course, far more important than a like lessening of the visual capacity of one eye in the case of a workman who has another sound eye. If the one-eyed workman loses the use of his sound eye, he becomes unable to earn a living, and if this misfortune befalls him outside of his employment in the insured establishment, he has not even a claim to compensation from the insurance institute. It would, therefore, certainly be an injustice if a workman who has lost an eye were denied compensation for the simple reason that he is able to perform his usual work without any loss in earnings. The consideration of other consequences of accidents leads to similar conclusions.

If the two combined facts that an injured person is engaged in the same occupation after the accident and makes the same earnings as before the accident do not justify the conclusion that he has suffered no injury to his earning capacity, how much less can the conclusion be reached from the single fact that the earnings are the same? In this connection it should be kept in mind that the earnings of a workman depend, in addition to his physical capacity for work, on quite a number of other circumstances, which are partly within and partly outside of his person. The longer the period which has elapsed from the occurrence of the accident up to the point of time on which comparisons are to be made as to the condition of the injured person, the more consideration should be given to the changes which have taken place in the personal conditions of the injured person (old age, possible infirmities not connected with the accident, etc.), on the one hand, and, on the other, in the economic conditions (business condition in general and in the industries to be considered with respect to the injured person in particular, increase of wages, etc.).

Brief mention should here be made of the fact that the conception as to the influence to be attributed to adjustment to injuries in the determination of the compensation has gradually become clearer in Germany, and especially of the fact that the imperial insurance office has adopted a different attitude to this question from that heretofore maintained. In Austria, as has been remarked, there does not exist in the compensation procedure a supreme appellate body, such as the German Imperial Insurance Office, which through its powerful influence guarantees the clearing up of disputed questions and thereby insures not merely a uniform interpretation of the legal provisions but also a sound development of the law.

COMPENSATION PRACTICE.

During the first years of their operation the Austrian insurance institutes had varying interpretations of compensation practice. While a majority of the territorial institutes considered the earnings after the accident an important but not exclusively decisive factor in the determination of the decrease of earning capacity, a minority of the institutes considered it as the only means for measuring the decrease of earning capacity, and consequently did not grant any compensation in instances in which diminished earnings could not be established, even if the visible injuries were very serious. An institute representing this interpretation of course can not escape the inference that if a decrease of earning capacity sets in at a later period and its casual connection with the consequences of the accident can not with absolute certainty be excluded, a compensation must be granted. The practical application of this interpretation soon encountered the greatest difficulties. Even if the influence, which old age or sickness and infirmities not connected with the accident may exercise, is left out of consideration, there may, in the case of each discharge from employment and of the unemployment of shorter or longer duration connected with it, be raised the question, How far is it due to the consequences of the accident? Unfavorable experiences forced the minority to adopt the interpretation of the majority, so that at present the territorial institutes are in accord as to the principles to be adhered to in the determination of compensation. The trade accident insurance institute of the Austrian railroads continues in adhering in a certain measure to the opposite interpretation, which is probably connected with the fact that a large number of its insured persons receive fixed salaries which, as a rule, are not decreased if the injured employee is continued in the service.

The determination of the visible consequences of injuries is a matter for the physician. All workmen's accident insurance institutes have established a more or less extensive expert medical service, and the determination of compensation is always effected on the basis of medical opinions rendered. The weight which the officials of the insurance institutes charged with the award of compensation attribute to these medical opinions varies in the individual institutes. While one institute, with few exceptions bases the award of compensation entirely on the medical estimate of the decrease of earning capacity, another institute, in addition, investigates what occupation the injured person is engaged in after the accident, and how much he earns, and, based on the agreement of the medical opinion with these circumstances, it estimates the degree of disability. The author of the present paper has on another occasion ("The Determination of the Degree of Disability," Vienna Congress, 1905, Pt. II, pp. 317ff) given his reasons for the opinion that the determination of the degree of disability is not exclusively a matter for the physician, and knows this opinion is not only in agreement with the expressions of the German Imperial Insurance Office, but also with the utterances of a considerable number of prominent physicians. With increasing frequency the admission is encountered in technical literature that the compensation scales now in use for specified visible injuries are based on very faulty principles. In inquiring into the origin of the scales in use, as, for instance, for loss of an eye, 25 to 33⅓ per cent; loss of the right arm, 75 per cent, etc., one will be surprised to find that none of them is based on systematic observation of facts, i. e., of the actual earnings made by persons who have suffered such injuries.

At the beginning of compulsory workmen's accident insurance the insurance institutes had merely adopted the compensation scales contained in the insurance contracts of private insurance companies, but quite generally increased the rates of compensation. Likewise, the scales of the private insurance companies (so-called scales for injuries to members of the body, *Gliedertaxe*) were not based on observation of actual conditions, but represent merely assumptions on which the two contracting parties have agreed. One is, therefore, mistaken in assuming that the usual compensation scales represent averages deduced from actual conditions, and that by small increases or decreases of the rates of these scales full justice can be done to the individual conditions of injured persons. The medical experts, who as a rule have no knowledge of the actual earnings of a large number of persons afflicted with a certain infirmity, of course, uphold the traditional scales of compensation which are also adopted by the courts of arbitration. In the case of insurance institutes which also consider the earning possibilities of pensioners the officials charged with the determination of the amounts of compensation, supported by observations of their own, often have doubts as to the value of the usual compensation scales, but, on account of the pressure in favor of maintaining existing conditions brought to bear upon them by tradition and by medical experts, they are hardly able to achieve results. This would only be possible if a general systematic observation of the pensioners should be introduced and the results scientifically compiled. Neither in Austria nor in Germany has this so far been attempted.

At any rate, in the case of several insurance institutes, the valuation of consequences of accident is no longer left entirely to the medical experts. In addition to the medical opinions these institutes consider the earnings of the injured persons after the accident and the experiences of other persons similarly injured.

It might be supposed that in the courts of arbitration less weight is given to the medical opinion because the presiding judge is assisted by four associates taken from practical life. In fact, it has been shown that the courts of arbitration deviate only in exceptional instances from the medical opinion. As a rule the court of arbitration simply adopts the rate of compensation proposed by the physician, and in case the physician in his proposed rate has left open a certain range, as, for instance, 15 to 25 per cent, it generally awards the higher rate, and in some instances goes even beyond that.

It has already been remarked that no uniform judicature exists in the Austrian accident arbitration courts; even in one and the same court of arbitration the legal point of view of the individual senates on important questions varies greatly. On the whole it may be said that in the procedure of the courts of arbitration, the determination of the degree of disability is governed more by the medical opinions than is the case in the practice of the insurance institutes. An explanation of this apparently strange phenomenon may be found in the fact that the laymen associates of the courts of arbitration are frequently less familiar with the legal provisions and, on the one hand, are not acquainted with such a great number of individual cases as the officials of the insurance institutes charged with the determination of compensation, and, on the other hand, do not have the general knowledge of the numerous and manifold activities of workmen, which seems to have been assumed by the legislator. In this connection it should be especially mentioned that a consolidation of the appealed claims for compensation according to related industries, and a corresponding selection of the associates for the senate in question is not practical; on the contrary, cases belonging to the most widely differing industries are argued in one session. If, for instance, in a senate a technical expert of the textile industry and one of the iron and steel industry sit as associates, these associates can not be considered as experts if accidents in flour mills, or in the wood-pulp industry, or in printing establishments, etc., are in question, but they must, nevertheless, render judgment in such cases. It must also be remarked here, with special stress, that observations made only occasionally do not give as reliable a basis for the formation of an opinion as do a large number of systematic observations.

From this discussion it is shown that the theoretically undisputed view that it is not the visible injuries in themselves but their injurious influence upon the earning capacity of the injured person which are decisive for the purposes of compensation, has not been realized in practice, and that the medical estimates of the degree of invalidity, which of course consider almost exclusively the visible injuries, govern the compensation practice, and this, too, is the case in the arbitration courts far more than among the insurance institutes. It logically follows from these conditions that adjustment to the consequences of injuries is only in a small measure considered in the determination of compensations. If the insurance institute has by means of observations ascertained that the pensioner is no longer hindered in his industrial activity through the consequences of the accident (which have not visibly or essentially changed) and reduces his pension, and the pensioner appeals to the arbitration court, the latter in 90 out of 100 cases awards the former pension if the medical experts render an opinion that the consequences of the accident have undergone no change.

As a consequence there exists to-day a wide disagreement between theory and practice, the removal of which may, in our opinion, be expected only in case the compensation rates are based on a general systematic observation of the earning capacity of the pensioners. We repeat here that the actual industrial activity of the injured person should not and need not be exclusively decisive in the determination of the compensation in any individual case, if only for the reason that otherwise the diligent workman who performs his work in spite of a handicap fares worse than the workman who relies upon a pension from the insurance institute.

Again, we assert with particular emphasis that the fact that a workman is continued in employment in the same establishment at the same wages should not be taken as sufficient reason for denying him compensation. The theoretical considerations which speak against such a practice have already been given on a previous page. From a practical point of view the following should be added: If an insurance institute should adopt the practice of making the award of a compensation conditional on a decrease in the earnings, it would, of course, never be difficult for an injured person who is an applicant for a pension to lessen his earnings. In order to prevent abuses the insurance institute would be compelled to keep its numerous pensioners under continuous observation. If the institute, on becoming aware that a pensioner is again in receipt of the same earnings as an uninjured workman of like occupation, withdraws the pension, it might occur that after a brief period the injured workman would again make a claim for compensation by reason that his earnings have now decreased as a consequence of the accident. If one further considers that the earnings even of a sound workman are dependent on various circumstances within and outside of his person, one will be convinced that the above practice can not be maintained for any length of time.

SYSTEMATIC OBSERVATION OF THE INDUSTRIAL ACTIVITY OF WORKMEN IN RECEIPT OF ACCIDENT PENSIONS.

Of vastly different importance are conclusions arrived at by means of systematic observation of a large number of pensioners. For instance, if, on observation of all machinists who have lost the index finger of the right hand, it is found that in the first year 90 per cent of them suffer a loss in earnings of between 5 and 15 per cent, no injustice would be done by awarding to persons having suffered a like injury a pension corresponding to a 15 per cent decrease of earning capacity.

Persons who have made the representation of the workmen's interests a special task have expressed apprehension that the proposed systematic observations may lead to a far-reaching reduction of the compensation rates now in use. This view may rise either from the silent admission that the compensation rates now in use exceed the damages actually caused or from the apprehension that the results of these observations may be misused to force the pensions down to a lower level. With respect to the first possibility it might be argued that in this case the law would not be applied according to its wording and spirit and that those who are obligated to contribute the means for the insurance would be illegally and therefore unjustly burdened. But even if we leave this aspect out of the question, we must figure with the possibility that occasional observations made on individual injured persons, who, although apparently seriously injured, continue to work in their trade without inconvenience, may also be extensively utilized as the basis of generalizations far beyond what could rightly be based on such individual cases. It is by no means intended that a person who is not professionally engaged in the determination of consequences of accidents may draw general conclusions from a few observations made occasionally, and try to apply them in practice. Because he has seen in a quarry a man at work who had lost his left hand, he may be induced to believe that quarrymen are, even after loss of the left hand, generally able to continue in their trade. If he had had opportunity to observe a larger number of men afflicted with the same infirmity, he would have been spared from making such an erroneous conclusion. For the determination of the degree of adjustment to the consequences of injuries here in question it is especially important that the greatest possible number of persons having suffered a specific injury be taken under observation. The danger of the incorrect use of observed facts is always greatest where the amount of data is small. The more extensive the data, the more do inherent accidental variations counterbalance one another, and the more free, therefore, from danger of subjective errors become the conclusions drawn from these data.

Systematic observation of the earning capacity of persons injured as a consequence of accident is especially possible where compensation is effected by means of pensions, and the residence of the pensioner and his earnings may at any time be ascertained. The method of observation must always be adapted to local conditions and special consideration must be given to the reliability of the various informants. It is obvious that information furnished by the pensioners themselves does not always fully correspond to the facts, but is unfavorably colored. Nor is the information obtained from the employers always correct; likes and dislikes here play a great part. While one employer, in the manifest attempt of aiding the injured workman in obtaining a high pension and at the same time of putting himself in a good light with his working force, exaggerates the consequences of the accident and claims that it is merely pity which induces him to employ the injured workman, another employer is only too much inclined to attribute the lessened efficiency of the injured workman to his laziness or to his shamming of disability in order to obtain a higher pension. Like caution must be observed with respect to the information obtained from communal and police authorities. Whosoever has some experience in these matters and pays proper consideration to the medical opinions will experience no difficulty in ascertaining in what instances a thorough investigation of such information is necessary. The material importance of the case is frequently great enough to justify the expenditure involved in the detailing of a supervisory official of the insurance institute to make a local investigation.

The movement of introducing systematic observation of the earning capacity of persons injured as a consequence of accidents has been opposed from many sides by those who do not approve of a fixed scale for injuries to members of the body (*Gliedertaxe*). This has also been shown in Austria in the discussion now taking place on the social insurance bill. The program for the reform and extension of workmen's insurance published in December, 1904, did not provide for any change in this respect. Article 174, however, of the social insurance bill introduced on November 3, 1908, contained the following provision:

> The minister of the interior is herewith authorized to decree provisions by means of administrative order which determine the maximum and minimum rates of compensation to be granted according to (*b*), i. e., in case of partial disability.

The committee on social insurance disapproved this provision, but a second bill now under discussion contained the same provision with the following amendment:

> The representatives of the employers and of the insured persons are to be heard separately before such an order may be issued.

Up to the present hour this bill has only been discussed in the subcommittee of the committee on social insurance, and the above paragraph has been approved with the following amendment:

> If these hearings should show that the majority of the representatives of the employers or of the insured persons are opposed to such an order its issuance is not permissible.

The opposition on principle to a scale of compensation for all typical consequences of injuries which takes all conditions into account is not quite intelligible. For, as a matter of fact, even at the present date, certain rates of compensation with unimportant deviations are generally in use. They are merely not recognized officially, and in individual instances it is therefore possible to deviate from them without having to give any reason for doing so. Such a state of affairs is hardly advantageous for the application of accident insurance, and especially where, as in Austria, an appellate body from the courts of arbitration does not exist. Where the composition of the senates changes (and it is a known fact that identical cases have been differently decided by different senates), there is a great danger that the injured persons and their attorneys will be led by the thought that there is always a possibility of success. It has been frequently observed that as long as his claim was pending in the court of arbitration an injured person did not work in his former place of employment, pretending that he could not perform his work, but reported for work as soon as a decision was rendered by the court. Sometimes the claim for compensation had no success at all in the court of arbitration and at other times the success was so unimportant that it fell far short of counterbalancing the loss of wages which the injured person had meanwhile suffered.

It is a fact generally known that in the case of some injured persons the desire to obtain the highest possible pension even assumes the form of a disease. The so-called pension mania (*Rentenhysterie*) has for some time been the subject of serious concern. It has frequently been asserted that the form of compensation, i. e., the payment of pensions, is to blame for this evil, and lump-sum payments have been recommended as a remedy. But the expediency of this remedy must be doubted, even if it is left out of consideration that in the case of serious consequences of injuries the permanent economic existence of the injured persons can only be assured by means of a pension. In our opinion very many, if not all, of the cases of pension mania could be avoided from the outset if the injured persons themselves could judge on the basis of the visible consequences of the injuries what compensation they might rightly expect. This would be possible if compensation rates were determined for the principal consequences of injuries, in which a range could be left for the consideration of special conditions of the individual injured person (occupation, age, sex, etc.).

Even if the last remarks have extended into the greater sphere of accident compensation in general, it may be asserted that they apply also to the determination of adjustment to injuries, the question particularly under discussion here.

The above discussion may be condensed into the following conclusions:

1. Under habituation or adjustment to the consequences of injuries is to be understood that condition in which the victim of an accident through the more intensive use of other parts of the body or of other organs so far equalizes serious injuries to parts of the body or to organs of sense that his earning capacity is not diminished at all, or in an essentially smaller degree than would otherwise be the case.
2. According to the wording and tendency of the laws regulating workmen's accident insurance in Austria the injury to the body is not itself decisive for the determination of the compensation of the injured person, but the lessened earning capacity consequent to it.
3. This conception is, however, only in a smaller measure realized in the Austrian accident compensation practice, for in case of unchanged visible consequences of the injury the pension is in most cases also left unchanged. This procedure is chiefly conditioned through the judicature of the courts of arbitration whose decisions may not be appealed to a higher body.
4. The contradiction between the contents of the legal provisions and the actual compensation practice may be explained by the fact that the measure for the determination of the consequences of acci-

dents has not been deduced from observation of the earning capacity of accident pensioners, which explains also the predominating influence of the medical opinions upon the determination of the degree of invalidity.

5. A basis for a compensation practice corresponding to the legal provisions in general and for a fair consideration of adjustment to the consequences of injuries in particular may be obtained through systematic observation of the earning capacity of the largest possible number of accident pensioners, which so far has not been introduced.

The earning capacity of an individual injured person at a specified date can neither from a theoretical point of view nor for practical considerations alone be decisive in the determination of the compensation. The fact that an injured person makes identical earnings at identical labor after the accident as before the accident should not lead to the conclusion that he has not been injured through the accident.

6. The method of investigation of the earning capacity of injured persons must be adapted to the organization of the insurance and to special conditions in the individual territories of the insurance institutes.

The second part of this article contains a summary compilation of 96 cases in which adjustment to the consequences of injuries may be assumed with more or less justification. The data given in the table were obtained from the workmen's accident insurance institutes by means of schedules which, in addition to the questions prescribed in the Bulletin des Assurances Sociales, contained the following questions: "Nature of occupation: Occupational training and possible permanent supplemental occupation." "Consequences of injury: Complication through infirmities not caused by the accident." Both of these questions relate to circumstances which should be considered in determining the compensation. If a person has through an accident been deprived of the possibility of making considerable earnings by means of a supplemental occupation, which he has exercised in addition to the occupation subject to insurance, he should be awarded a higher compensation. A higher compensation should, likewise, be awarded if the effect of the injury caused by the accident on the earning capacity is increased through an infirmity not connected with the accident; for instance, decrease in the visual capacity of one eye if that of the other eye had been less than normal before the accident, or loss of the right index finger if the middle finger had been partially disabled before the accident. Decrease of the earning capacity to a lesser extent should, on the other hand, be assumed if an organ which was already partially disabled before the accident has been affected by the injury; for instance, loss of an eye, the visual capacity of which was already lessened, while that of the other uninjured eye is perfectly normal; or loss of a stiffened finger.

The last question contained in the schedule of the bulletin, "On what is the new determination based (medical opinion or other basis)," has not been included in the present compilation. In this respect it may be said that the new determination is with rare exceptions nearly always preceded by a new medical examination. In so far as the determination of the earning capacity is concerned, the procedure has not always been described in detail in the schedules, and the description would, moreover, not be of any special value because the procedure must be adapted to local conditions.

The annual earnings are always given in crowns. The degree of decrease of the earning capacity has been shown in per cents, according to the general practice. The fractions of these per cents always correspond to easily comprehensible fractions of the unit (33⅓ per cent=⅓; 8⅓ per cent=$\frac{1}{12}$, etc.), from which result whole per cents of pension; for 33⅓ per cent disability a 20-per cent pension, for 16⅔ per cent disability a 10-per cent pension, for 41⅔ per cent disability a 25-per cent pension, etc. There were only a few cases in which the first determination of the degree of disability was appealed to the court of arbitration. These cases have been marked in the table by showing the determination of the court of arbitration in per cent prefixed by the letters "c. a." A much larger number of instances were reported in which revisions of the first determination were appealed to the courts of arbitration. In such instances the determination made by the court of arbitration in addition to that made by the insurance institute is always shown. In this connection, however, it should be remarked that the small number of appeals reported by individual institutes gives rise to the assumption that the information as to whether an appeal was taken to the court of arbitration and with what success may now and then through some misunderstanding have been omitted.

The cases enumerated in the following table are with few exceptions of considerable interest for the compensation practice in general, but only some of them are of importance for the particular question of adjustment here under discussion, if the interpretation of adjustment is to be governed by the definition given above. If one intends to be very accurate in this respect it will be necessary that data as to the consequences of the injuries at the time of the revision based on the medical opinion also be requested. If this is not done there is always a possibility that cases will be included in which there is not a gradual adjustment to essentially unchanged consequences of injuries, but a gradual improvement in the consequences of injuries themselves. This conjecture is certainly suggested by some of the cases included in the table, but the removal of these doubts by means of new information obtained from the insurance institutes was not practicable.

The sequence of the cases, according to the consequences of the injuries, corresponds to the practice adopted in the publications of the German imperial insurance office.

REVISION OF COMPENSATION IN 96 CASES SHOWING ADAPTATION

Line No.	Occupation and establishment in which employed at time of accident.	Date of accident.	Age at time of accident.	Annual earnings.	Part of body injured.	Nature of injury.	Consequences of injury.
				Crowns.			
1	Engineer, steam thrashing machine.	Dec. 13, 1912	54	1,560	Right thumb.	Laceration and contusion.	Lessened mobility of first joint.
2	Thread picker, cotton spinning mill.	Aug. 11, 1910	54	675	Back of right hand and thumb.	Lacerated wound and rupture of the tendons.	Right thumb cicatrized, can not be normally extended.
3	Bricklayer, building enterprise.	Oct. 31, 1907	28	1,138	Right thumb.	Wound from a cut.	Loss of distal phalanx, blunt wound, tender and sensitive.
4	Stonecutter, tombstone-cutting establishment.	Jan. 4, 1899	26	878	.....do........	Contusion.....	Partial loss of the distal phalanx, nail rudimentary, mobility of distal phalanx limited.
5	Day laborer, steam sawmill.	July 28, 1908	24	688	.....do........	Cut...........	Loss of distal phalanx, sensitive stump, nearly stiff.
6	Iron worker (by trade, machinist), tube rolling mill.	May 14, 1903	18	719	.....do........	Compound laceration and contusion.	Stiffness of first phalanx and immobility of distal phalanx, distal phalanx removed by operation 1½ years later.
7	Iron turner, machine factory.	Sept. 3, 1890	29	1,241	.....do........	Flesh wound 3 centimeters long on second phalanx opening the joint.	Stiffness of second joint at obtuse angle.
8	Machine hand, wire, leaden goods, and nail factory.	June 28, 1892	18	329	.....do........	Crushing of the bone and of the fleshy parts.	Loss of the entire right thumb.
9	Day laborer, sawmill.	Dec. 5, 1894	27	360	.....do........	Cut...........	Loss of thumb up to metacarpal bone.
10	Weaver, cotton-weaving mill.	Apr. 26, 1909	22	532	Right index finger.	Crushing of final phalanx.	Truncation and stiffness of distal phalanx.
11	Mirror plater, plate-glass and mirror factory.	Jan. 18, 1911	33	1,230	.....do........	Contusion.....	Scar on inside of hand, pain in finger, atrophic, stiffness of intermediate phalanges.
12	Master sizer, weaving mill.	July 17, 1900	44	1,744	.....do........	Jagged wound.	Ankylosis in second phalanx, stiffness of third phalanx, rigid in extended position.
13	Day laborer, railroad construction.	June 5, 1899	33	870	.....do........	Contusion.....	Loss of half the tip of the finger, stiffness in all joints.

TO THE CONSEQUENCES OF ACCIDENTAL INJURIES—AUSTRIA.

First determination of compensation.		Revision of compensation.						Remarks.	Line No.
Number of months elapsed since accident.	Degree of disability determined in per cent of total disability.	Period elapsed since first determination.		Occupation and establishment in which employed at time of revision.	Annual earnings.	Degree of disability determined in per cent by—			
		Years.	Months.			Insurance institute.	Court of arbitration.		
					Crowns.				
4	8⅓	......	6	Same as before accident.	1,800	0	......	......	1
3	15	2	8	Wool mixer, same establishment.	660	8⅓	8⅓	......	2
5	25	5	1	Same as before accident.	1,680	0	0	......	3
2	20	(a) 1 (b) 10	 4	....do....	(1) 1,141	15 8⅓	....	......	4
4	33⅓	4	2	Laborer in a chemical factory.	837	0	......	......	5
6	15	(a) 3 (b) 8	 6	Machinist in same establishment.	840 1,582	10 (15)	15	...... Determination on occasion of a second accident.	6
2	35	(a) 1 (b) 19	5 7	Iron turner...... Master turner, same establishment.	(1) 1,400	0 10	15	......	7
2	35	6	2	Same as before accident.	675	35	......	Determination on occasion of a second accident; in same occupation.	8
2	33⅓	4	5	Sawyer, same establishment.	484	33⅓	......	Determination on account of an injury to a foot; same establishment.	9
1	8⅓ c. a. 20	(a) (b) 3	8	Same as before accident. Weaver, in a foreign establishment.	(1) 780	8⅓ 0	....	......	10
2	20	1	10	Same as before accident.	1,352	0	0	......	11
5	25	11	11	....do....	2,012	0	......	......	12
2	25	13	6	Day laborer, in another establishment.	1,260	0	......	......	13

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[1] Unchanged.

REVISION OF COMPENSATION IN 96 CASES SHOWING ADAPTATION TO

Line No.	Occupation and establishment in which employed at time of accident.	Date of accident.	Age at time of accident.	Annual earnings.	Part of body injured.	Nature of injury.	Consequences of injury.
				Crowns.			
14	Day laborer, sawmill.	Mar. 23, 1905	35	540	Right index finger.	Lacerations and contusions.	Loss of 1½ phalanges.
15	Female worker, chemical factory.	Nov. 2, 1905	15	120	.....do.........	(?).............	Loss of 1½ phalanges.
16	Oiler boy, paper mill.	May 6, 1903	18	480	.....do.........	Contusion.....	Loss of 2 phalanges.
17	Stamper, enameled ware factory.	Sept. 15, 1897	31	675	.....do.........	2 phalanges torn off.	....do.............
18	Machinist, of electric machinery and apparatus factory.	Dec. 4, 1899	29	2,057	Right middle finger.	Contusion.....	Loss of nail, club-like enlargement, scarred malformation and sensitiveness of third phalanx.
19	Machine hand, furniture factory.	Apr. 7, 1899	29	709	.....do.........	Separation of a phalanx.	Loss of distal phalanx, sensitiveness of stump.
20	Machine hand, passementerie works.	Mar. 21, 1907	27	898	.....do.........	Laceration with subsequent phlegmon.	Stiffness of finger in a curved position.
21	Carpenter, building enterprise.	Sept. 6, 1901	48	690	.....do.........	Cut...........	Shortening of finger by 2¼ centimeters.
22	Day laborer, steam sawmill.	Sept. 23, 1911	29	623	.....do.........	Contusion.....	Loss of 2 phalanges.
23	Oiler, weaving mill.	Apr. 26, 1910	41	788	Right little finger.	Fracture......	Loss of finger......
24	Boiler maker, boiler factory.	Mar. 14, 1912	42	888	Right index and middle fingers.	Contusion of the third phalanx.	Loss of half of third phalanx of middle finger, cicatrization of third phalanx of middle finger.
25	Dairy wagon driver, injured while operating a chaff cutting machine.	Feb. 3, 1905	23	523	.....do.........	.....do.........	Loss of third phalanx of index and middle fingers, sensitiveness of scarred stumps.
26	Machine oiler, tube rolling mill.	Aug. 7, 1901	31	1,145	.....do.........	Crushing of the third phalanx of the index finger, and laceration and contusion of the middle finger.	Loss of third phalanx of index finger, stump stiff; middle finger stiffened; both fingers rigid in extended position.
27	Laborer, sawmill.	Dec. 6, 1899	19	270	Right index, middle, and ring fingers.	Contusion and laceration.	Loss of third phalanx of the index finger, stiffness of the stump in second phalanx; stiffness of middle finger.

THE CONSEQUENCES OF ACCIDENTAL INJURIES—AUSTRIA—Continued.

First determination of compensation.		Revision of compensation.						Remarks.	Line No.
Number of months elapsed since accident.	Degree of disability determined in per cent of total disability.	Period elapsed since first determination.		Occupation and establishment in which employed at time of revision.	Annual earnings.	Degree of disability determined in per cent by—			
		Years.	Months.			Insurance institute.	Court of arbitration.		
					Crowns.				
24	16 c. a. 20	5	....	Mine laborer........	840	0	0	....	14
3	40	(a) 1 (b) 4	9 4	Unemployed........ Laborer in a canning establishment.	 288	20 0	....	....	15
1	20	(a) (b) 10	11	(?).................. Beater helper in another mill.	(?) 780	10 0	....	....	16
2	15 (c a)20	15	....	Planisher in same establishment.	819	15	......	Had in a previous accident lost 2 phalanges of little finger of left hand.	17
2	8⅓	12	11	Master stamper in another establishment.	2,804	0	......	....	18
4	10	1	6	Same as before accident.	(1)	0	......	....	19
4	30	6	7	Galloon maker in a furniture trimmings factory.	1,138	0	......	....	20
6	20	11	10	Carpenter in another building enterprise.	1,140	0	......	....	21
3	10	1	4	Helper in a brewery.	927	0	0	....	22
3	10 c a 10	....	8	Same as before accident.	(1)	0	0	....	23
4	25	1	....	Same as before accident.	926	0	......	....	24
2	10	(a) 1 (b) 3 (c) 4	5 5 5	Same as before accident.	342 342 664	25 20 10	....	....	25
3	20	(a) 3 (b) 8	 8	Engineer in same establishment.	(1) 1,480	15 8⅓	....	....	26
3	50	(a) 1 (b) 8	 8	Same as before accident.	360 642	25 25	....	....	27

[1] Unchanged

REVISION OF COMPENSATION IN 96 CASES SHOWING ADAPTATION TO

Line No.	Occupation and establishment in which employed at time of accident.	Date of accident.	Age at time of accident.	Annual earnings.	Part of body injured.	Nature of injury.	Consequences of injury.
				Crowns.			
28	Machine hand, skilled turner, brushwood factory.	Apr. 13, 1899	32	387	Right middle and ring fingers.	Complicated fractures.	Loss of third phalanx of middle and ring fingers.
29	Helper, brewery.	Aug. 26, 1899	28	1,226	Right ring and little finger.	Contusions....	Ring finger stiffened in second and third phalanx; little finger thickened in first phalanx and stiffened in other phalanges.
30	Calico printer, calico printing establishment.	July 23, 1894	17	832	.....do.........	.....do.........	Loss of both fingers.
31	Female worker, cordage factory.	June 27, 1912	19	354	Right thumb and back of hand.	Contusion.....	Scar on back of hand; thumb shortened, stiff, atrophied; second and third metacarpal bone thickened.
32	Machinist, agricultural implements factory.	Jan. 7, 1910	20	803	Right index, middle, and ring finger.	Lacerations and contusions.	Distal phalanx of index finger scarred and stiffened; middle finger thickened and stiffened; back of ring finger scarred.
33	Journeyman carpenter, electrical machinery and appliances factory.	Apr. 4, 1900	23	1,413	Right middle finger.	Contusion.....	Loss of third phalanx of middle finger, stump atrophied, rigid in extended potion; ring and little fingers also partially rigid in extended position.
34	Day laborer, sawmill.	Aug. 17, 1906	17	420	Right hand...	Cuts..........	Loss of thumb, of phalanges of index finger, of 2 phalanges of middle finger, and of third phalanx of ring finger.
35	Fireman, electrical machinery and apparatus factory.	Apr. 13, 1899	26	1,327	.....do.........	Laceration and contusion of back of the hand.	Back of hand thickened, slightly edematous; first phalanges of index, middle, ring, and little fingers so stiffened that fist can not be formed.

THE CONSEQUENCES OF ACCIDENTAL INJURIES—AUSTRIA—Continued.

First determination of compensation.		Revision of compensation.						Remarks.	Line No.
Number of months elapsed since accident.	Degree of disability determined in per cent of total disability.	Period elapsed since first determination.		Occupation and establishment in which employed at time of revision.	Annual earnings.	Degree of disability determined in per cent by—			
		Years.	Months.			Insurance institute.	Court of arbitration.		
					Crowns.				
2	40	(a) 1	....	Same as before accident.	300	10	30	....	28
		(b) 10	....	Machine hand in another establishment.	919	10	......		
2	16⅔	13	....	Pieceworker in a brick kiln.	936	8⅓	......	....	29
15	33⅓	7	8	Operating official in a brewery.	2,400	10	......	....	30
4	73	....	8	Same as before accident.	390	33⅓	33⅓	....	31
1	75	3	....	Machinist, in another agricultural implements factory.	1,131	0	0	....	32
4	25	13	6	Carpenter, in another establishment.	2,100	10	......	....	33
4	80	7	....	Forest worker at wood cutting.	1,200	30	......	....	34
2	50	13	5	Fireman, in another establishment.	1,650	8⅓	......	Tremor of the hands not caused by the accident.	35

REVISION OF COMPENSATION IN 96 CASES SHOWING ADAPTATION TO

Line No.	Occupation and establishment in which employed at time of accident.	Date of accident.	Age at time of accident.	Annual earnings.	Part of body injured.	Nature of injury.	Consequences of injury.
				Crowns.			
36	Log peeler, wood-pulp factory.	June 25, 1907	17	688	Right hand...	Cut on back of hand, severance of third and fourth tendons.	Deformity of third and fourth metacarpal bone; ankylosis of first phalanx of all fingers with exception of the thumb.
37	Laborer (skilled machinist), shade and Venetian blind factory.	Apr. 18, 1899	31	900	Right index, middle, ring, and little fingers.	Lacerations...	Scarred deformity of third phalanx of index, middle, and little fingers; second and third phalanges rigid in extended position, stiffening of these phalanges of the ring finger, atrophy and sensitiveness of all fingers.
38	Machine hand, nail factory.	Oct. 4, 1899	23	768	.....do.........	Contusion.....	Stiffness of index and little fingers; loss of 2 phalanges of middle and ring fingers.
39	Day laborer, ice company.	Sept. 28, 1904	51	728	Right thumb..	Contusion, subsequent phlegmon.	Musculature of upper arm lessened; stiffness of the third phalanx of little finger; partial stiffness of other fingers.
40	Assembler, machine factory.	July 2, 1909	26	3,215	Left thumb...	Cut; severance of tendon.	Stiffness in both joints caused by scars.
41	Factory hand, leather factory.	Oct. 12, 1912	61	790	.....do.........	Cut...........	Thumb thickened, limited motion, small fistula on second joint.
42	Blaster, underground construction.	May 8, 1907	33	1,386	.....do.........	Compound fracture.	Ankylosis in distal joint; first joint stiffened.
43	Machine hand, furniture factory.	June 5, 1899	33	1,455	.....do.........	Cut...........	....
44	Glass sorter, glass factory.	July 2, 1909	43	768	.....do	Punctured wound.	Loss of distal phalanx.
45	Day laborer, malt house.	Oct. 31, 1898	37	693	.....do.........	Contusion and laceration.	Stiffness in both phalanges in extended position. Deformaity of first phalanx.
46	Straw cutter, paper mill.	Nov. 26, 1895	30	797	Left index finger.	Serious contusion.	Loss of two phalanges.

THE CONSEQUENCES OF ACCIDENTAL INJURIES—AUSTRIA—Continued.

First determination of compensation.		Revision of compensation.						Remarks.	Line No.
Number of months elapsed since accident.	Degree of disability determined in per cent of total disability.	Period elapsed since first determination.		Occupation and establishment in which employed at time of revision.	Annual earnings.	Degree of disability determined in per cent by—			
		Years.	Months.			Insurance institute.	Court of arbitration.		
					Crowns.				
7	0 (ca)50	(a) 1 (b) 3 (c) 5	....	Same as before accident. Table man, plate mill.	720 780 1,200	33⅓ 20 15	41⅔ 20	....	36
4	60	13	1	Market helper in another establishment.	(?)	8⅓	......	Suffers from heart disease not caused by the accident.	37
4	50	9	....	Laborer, stock rooms of same establishment.	768	40	......	....	38
3	75	(a) 1 (b) 3 (c) 4	....	Day laborer in various establishments.	600 720 720	66⅔ 50 25	....	....	39
1	10	(a) 1 (b) 4	4	Same as before accident.	(1)	8⅓ 0	....	....	40
3	16⅔	....	10	.....do	(1)	0	......	....	41
2	9	7	....	.....do	1,815	0	......	....	42
2	25	13	4	.....do	1,740	16⅔	......	....	43
1	15	(a) 1 (b) 4	4	Day laborer, employed in unloading. Auxiliary packer in same establishment.	619 720	10 0	....	....	44
2	20	10	2	Day laborer, well-boring enterprise.	780	8⅓	......	....	45
12	15	18	....	Adjuster, iron and steel works.	1,140	0	......	....	46

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[1] Unchanged.

REVISION OF COMPENSATION IN 96 CASES SHOWING ADAPTATION TO

Line No.	Occupation and establishment in which employed at time of accident.	Date of accident.	Age at time of accident.	Annual earnings.	Part of body injured.	Nature of injury.	Consequences of injury.
				Crowns.			
96	Bricklayer, building industry.	Mar. 27, 1899	22	1,067	Breast and left hip.	Contusion.....	Left ribs alongside the breast bone very convexly prominent and thickened; left arm can not be lifted to a horizontal position; severe tremor of head and hands; pulse 120; knee reflexes increased; stooping impeded.

THE CONSEQUENCES OF ACCIDENTAL INJURIES—AUSTRIA—Concluded.

First determination of compensation.		Revision of compensation.						Remarks.	Line No.
Number of months elapsed since accident.	Degree of disability determined in per cent of total disability.	Period elapsed since first determination.		Occupation and establishment in which employed at time of revision.	Annual earnings.	Degree of disability determined in per cent by—			
		Years.	Months.			Insurance institute.	Court of arbitration.		
					Crowns.				
2	50	13	6	Bricklayer in another establishment.	960	0	......	....	96

REVISION OF INDUSTRIAL ACCIDENT AND SICKNESS INSURANCE LAWS OF NORWAY.

The new sickness insurance law of Norway, which is a codification of the law of 1909 and amendments of 1911, together with additional provisions, became effective, with certain exceptions, on January 3, 1916. It provides both compulsory and voluntary health insurance. Its compulsory features embrace all employed wage earners in public and private service who are 15 years of age or over, but exempts those whose annual earnings exceed 1,600 crowns ($428.80) if living in rural districts, and 1,800 crowns ($482.40) if living in urban districts. Formerly these amounts were 1,200 crowns ($321.60) and 1,400 crowns ($375.20) respectively. The law also excludes seamen, who are provided for by a separate law; aliens covered by the laws of their own country; those in receipt of poor relief; those whose employment is in the nature of charitable or relief work; and those in the employment of a foreign Government. In order to receive benefit under the law employment must extend over a period of at least six days, which, however, need not be consecutive. A sick fund may exclude from membership a person suffering with a chronic disease. The term "wage earner" includes peasant farmers, household or domestic servants, and apprentices. It is especially provided that the royal institution of insurance, which administers both the sickness insurance and the accident compensation law of the Kingdom, may increase the limit of income classes provided, and that the Crown may decree that entire classes of workmen in certain regions or in the whole Kingdom shall be assigned to a particular income class regardless of their individual incomes.

Any person 15 years of age and over and not included in the compulsory insurance, no matter how small his income, may take out voluntary health insurance, provided the earnings of himself and wife do not exceed 1,600 crowns ($428.80) if living in a rural district, or 1,800 crowns ($482.40) if living in an urban district (formerly 800 crowns ($214.40) and 1,000 crowns ($268) respectively); that he present a medical certificate establishing the good health of himself and his dependents; that he receive no aid on account of sickness occurring before he has been a member for at least 4 weeks (formerly 12 weeks); and that he does not exceed 50 years of age (40 years under the former law).

To facilitate assessment of contributions and payment of benefits, persons insured voluntarily or compulsorily are assigned by the royal institutions of insurance to certain income classes, as follows:

INCOME CLASSES OF MEMBERS OF LOCAL SICKNESS SOCIETIES.

Class.	Annual income.
1	300 crowns and under ($80.40).
2	Over 300 to 600 crowns ($80.40-$160.80).
3	Over 600 to 900 crowns ($160.80 -$241.20).
4	Over 900 to 1,200 crowns ($241.20-$321.60).
5	Over 1,200 crowns ($321.60).

The benefits under the system are as follows: To a member himself (1) free medical attendance and necessary surgical supplies; (2) in case of sickness due to injuries coming under the accident-insurance law, free medicine; (3) in case of invalidity, pecuniary aid equal to 60 per cent of the average daily wages according to his income class, as follows:

PROPORTION OF BENEFITS PAID TO BENEFICIARIES IN EACH INCOME CLASS.

Class.	Benefits.
1	0.60 crowns ($0.161).
2	0.90 crowns ($0.241).
3	1.50 crowns ($0.402).
4	2.10 crowns ($0.563).
5	2.70 crowns ($0.724).

But the pecuniary aid, together with any payment received for work during sickness, or with any pecuniary aid he may receive from private sickness insurance, shall not exceed 90 per cent of his actual income at the beginning of his sickness. (4) In case of confinement pecuniary aid for 8 weeks (2 weeks preceding confinement); a maternity relief is provided of at least 1 crown (26.8 cents) per day, conditioned on said member having been a member of a sick fund for at least 10 consecutive months immediately preceding. (5) Funeral aid of not to exceed 50 crowns ($13.40). A woman in confinement also receives free nursing care in addition to the maternity cash benefits. The wife of a member insured in the sick fund receives free services of a midwife and 30 crowns ($8.04) cash maternity benefits. For cash benefits care in an institution may be substituted, in which case 50 per cent only of the pecuniary benefits are paid to dependents in the home.

To meet its expenses a local sick fund may require the payment of premiums according to the scale in force for the fund at the time; for funds having no regular tariff of premiums the Government department provides such. It is presumed that tariffs are made to cover the expenses of the funds. Premiums are paid as follows: In the case of a compulsorily insured member, six-tenths by the member, one-tenth by his employer, one-tenth by the municipality, and two-tenths by the State; in the case of voluntarily insured members, seven-tenths by the member, one-tenth by the municipality, and two-tenths by the State. These rates are the same as in the law of 1909. The employer pays the premium by making a deduction from the wages of his employee.

The central administrative body of the sickness insurance system is the Royal Institution of Insurance, which supervises local funds, one of which must be established in each municipality or town. The expenses of the institution are borne by the State. Beside the public funds established as indicated, trade funds and private funds may also be established as carriers of the insurance. All these are subject to the close inspection of the central administrative authority. To gain recognition a society must have at least 200 members, while public funds may be organized with 100 members. In general, the administrative provisions of the law are identical with those of the law of 1909. (See Twenty-fourth Annual Report of the Commissioner of Labor, 1909: Workmen's Insurance and Compensation Systems in Europe, vol. 2, pp. 2064–2073.)

A recent number of the Journal of the Norwegian Labor Office calls attention to the fact that according to the law of July 26, 1912, governing the practice of physicians in the Kingdom, the local physicians are required to give medical aid to the inhabitants of their district at the ordinary rate of compensation. They are also required to serve as physicians for the district sick fund under such agreement as may be drafted by the labor department. In order to prevent excessive fees under the sickness insurance law the Royal Institution of Insurance is given power, upon the proposal of a local sick fund and with the consent of the labor department, to substitute cash benefits for free medical help or for the services of a midwife.

In order to prevent a recognized fund from taking in only the safer risks at the expense of the local fund the law in question provides that the former shall include all wage earners at the establishment in question who are subject to the compulsory insurance, and that the members of recognized trade funds subject to compulsory insurance shall remain members of such fund as long as they belong to the trade for which the fund is created.

The new industrial accident insurance law which became effective on January 1, 1916, involves changes in the former law as follows:

The number of industries covered is increased by adding express and hauling, provided at least two horses are used or the business is conducted in connection with other industries covered by the law; work on lighters or scows of 50 or more tons register; electric heating and power plants; agricultural operations in which mechanical power is used.

Nonresident foreign dependents are excluded from participation in pensions allowed in case of death of an injured person.

Medical and hospital treatment are provided from time of injury, payment for the first 10 days being from the sickness-insurance fund and after that time from the accident-insurance fund. If the injured person is not a member of the sickness-insurance fund, such treatment must be at the cost of the employer from the first day of injury.

If an injured person is forced to remain in a hospital, dependents are granted an allowance during such time, the amount varying according to the number of dependents, of from 20 to 50 per cent of the injured person's earnings.

WORKMEN'S COMPENSATION LAW IN JAPAN.

By a decree issued August 2, 1916, in accordance with the provisions of the factory act of March 28, 1911, Japan has introduced a system of compensation for injuries to certain classes of workers. The decree applies to factory workers only. A minimum compensation is provided for in case of injury, sickness, or death sustained while at work.

In all cases of injury medical services and supplies are furnished at the cost of the employer, and a compensation equal to one-half daily wages for the first three months of disability and to one-third after that period. After three years of medical attendance, the employer may relieve himself of further obligations by paying the injured operative a sum equal to "more than 170 days' wages." If after recovery the operative is not fully restored to his previous physical condition or is not able to resume his former occupation, or in case the operative is a woman and her appearance is marred, a further payment equaling from 30 to 170 days' wages is required.

The compensation payable in case of death consists of medical services and supplies, a funeral benefit of 10 yen ($4.98), and a compensation equal to more than 170 days' wages, payable to dependents or others living in the same family with the operative. Amounts of compensation received under proceeding under the civil code may be deducted from the compensation provided.

The governor of the prefecture is authorized to mediate all disputes.

LEGAL REGULATION OF WELFARE WORK IN GREAT BRITAIN.

In the early part of the present year the British ministry of munitions established a welfare department, charged with the general responsibility of securing a higher standard of conditions for all woman and girl workers in munition factories through welfare supervision, and Mr. B. Seebohm Rowntree, a manufacturer well known for his social studies, "Poverty," "Land and Labor," and "Unemployment," was appointed director. More recently, by the police, factories, etc. (miscellaneous provisions) act, 1916, bearing date of August 3, 1916, important powers were conferred upon the home secretary to secure the welfare of workers in factories and workshops by the issue of orders regulating such matters as arrangements for preparing or heating and taking meals, supply of drinking water and protective clothing, ambulance and first-aid provision, supply and use of seats in workrooms, facilities for washing, accommodation for clothing, and supervision of workers. A notable provision of the law is the requirement that no contribution shall be exacted from the workers, "except for the purpose of providing additional benefits which, in the opinion of the secretary of state, could not reasonably be required to be provided by the employer alone, and unless two-thirds at least of the workers affected * * * assent."

The abolition of the certifying surgeons' investigations of accidents is in accordance with the recommendations of the British departmental committee on accidents made in 1911. That part of the law relating to welfare work and to investigations of accidents follows:

PART II.—FACTORIES AND WORKSHOPS.

7. *Provisions for securing welfare of workers in factories and workshops.*—(1) Where it appears to the secretary of state that the conditions and circumstances of employment or the nature of the processes carried on in any factory or workshop are such as to require special provision to be made at the factory or workshop for securing the welfare of the workers or any class of workers employed therein in relation to the matters to which this section applies, he may by order require the occupier to make such reasonable provision therefor as may be specified in the order, and if the occupier fails to comply with the requirements of the order or any of them, the factory or workshop shall be deemed not to be kept in conformity with the factory and workshop act, 1901.

(2) The following shall be the matters to which this section applies:

Arrangements for preparing or heating and taking meals; the supply of drinking water; the supply of protective clothing; ambulance and first-aid arrangements; the supply and use of seats in workrooms; facilities for washing; accommodation for clothing; arrangements for supervision of workers.

(3) Orders may—

(*a*) Be made for a particular factory or workshop, or for factories or workshops of any class or group or description.

(*b*) Be made contingent in respect to particular requirements upon application being made by a specified number or proportion of the workers concerned, and may prescribe the manner in which the views of the workers are to be ascertained.

(*c*) Provide for the workers concerned being associated in the management of the arrangements, accommodation or other facilities for which provision is made, in any case where a portion of the cost is contributed by the workers;

but no contribution shall be required from the workers in any factory or workshop, except for the purpose of providing additional or special benefits which, in the opinion of the secretary of state, could not reasonably be required to be provided by the employer alone, and unless two-thirds, at least, of the workers affected in that factory or workshop, on their views being ascertained in the prescribed manner, assent.

(4) If, in the case of any order proposed to be made for a particular factory or workshop, the occupier, or, in the case of an order for factories or workshops of a particular class or group or description, the majority of the occupiers of factories or workshops of that class or group or description, dispute the reasonableness of the requirements in the proposed order or any of them, the objection shall be referred for settlement to a referee selected in accordance with rules made under this section, but the secretary of state may so refer any objection though not made by a majority of the occupiers if he thinks desirable.

(5) Save as otherwise expressly provided in the order, the occupier of a factory or workshop shall not make any deduction from the sum contracted to be paid by him to any workman or receive any payment from any workman in respect of any provision made in pursuance of an order under this section, and, if he makes any such deduction or receives any such payment, he shall be guilty of an offense against the truck act, 1831, and shall be liable to the penalties imposed by section 9 of that act as if the offense were an offense mentioned in that section.

(6) The secretary of state may make rules as to the time within which, and the manner in which, notice of objection to any order may be made, and as to the selection of, and the procedure before, a referee and the cost of the proceedings before a referee (including the remuneration of the referee).

(7) Any order made under this section may be revoked at any time in whole or in part by the secretary of state, without prejudice to the making of a further order.

(8) This section shall not apply to domestic factories or workshops.

(9) The secretary of state may by a special order made in accordance with the provisions of section 126 of the factory and workshop act, 1901, extend the matters to which this section applies to matters other than those mentioned in this section.

8. *Abolition of investigations of accidents by certifying surgeons.*—(1) After the expiration of one month from the passing of this act it shall cease to be the duty of certifying surgeons to investigate the nature and cause of death or injury caused by accidents in factories and workshops or in premises to which the provisions of the factory and workshop acts, 1901 to 1911, relating to accidents, are applied, or to send to the inspector of the district reports thereof:

Provided, That nothing in this section shall affect subsection (3) of section 73 of the factory and workshop act, 1901, relating to the investigation by certifying surgeons of diseases occurring in factories and workshops:

Provided also, That it shall continue to be the duty of the certifying surgeon to investigate and report upon cases of injury caused by exposure to gas, fumes, or other noxious substances or due to any other special cause specified in instructions of the secretary of state as requiring investigation, and the secretary of state shall issue instructions defining the causes of injury to which this provision is to apply and requiring the inspector of the district to refer to the certifying surgeon all such cases reported to him. It shall also be the duty of the certifying surgeon to investigate and report upon any case of injury which the inspector of the district in pursuance of any general or special instructions of the secretary of state may refer to him for that purpose. The certifying surgeon shall have, for the purpose of the investigation in any such case, the same powers and shall be entitled to receive the same fee as he would if the case had been a case to which section 73 applies.

(2) As from the same date the enactments mentioned in the schedule to this act shall be repealed to the extent mentioned in the schedule to this act.

9. *Construction of Part II.*—This part of this act shall be construed as one with the factory and workshop acts, 1901 to 1911. * * *

13. *Short title.*—This act may be cited as the police, factories, etc. (miscellaneous provisions) act, 1916. [Aug. 3, 1916.]

VALUE OF WELFARE SUPERVISION TO THE EMPLOYER.[1]

BY B. SEEBOHM ROWNTREE, DIRECTOR OF WELFARE DEPARTMENT, BRITISH MINISTRY OF MUNITIONS.

The editor asked me to write a few notes, based on personal experience during 20 years, on the value to the employer of what has come to be known as "Welfare supervision."

Some employers tell you they do not know what this phrase means. This is only because it is a new name for something which has been carried on to a greater or lesser extent ever since there were factories. Welfare supervision is simply the creation in a factory of those conditions which enable each individual worker to be and do his or her best.

So long as factories were very small there was no need of any special organization to secure this end; the master knew each of his men personally, and if he was wise he saw that each was put to the work best fitted for him and worked under conditions which enabled him to do his utmost both for his employer and himself. But as factories grew larger and larger this personal relation was crowded out. The employer no longer knew his workers even by name. They came to be impersonal "factory hands" to him, who were treated in the mass, without individual consideration. Even when he honestly desired to do well by them it was increasingly difficult for any worker who had some personal grievance to get it remedied, and too little care was taken to suit the work to the worker and surround him with conditions tending to the utmost efficiency.

Gradually it became clear that this state of things was unsatisfactory from every point of view, and many employers appointed special officers simply to reestablish the personal relation between themselves and the workers, which still exists in many small factories. The special officers undertaking this work bear different names in different factories; but perhaps the most usual title is that of "welfare supervisor," which was adopted by the health munition workers' committee when writing on the subject in relation to munition factories. Both men and women welfare supervisors have been appointed, though the latter greatly outnumber the former, and it is of welfare supervision among women that the editor has more especially asked me to write.

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[1] Reprinted from an article entitled "Making a success of the woman worker," in System (London Edition) for June, 1916, through the courtesy of the publishers, A. W. Shaw Co., Chicago, Ill.

It is a subject which has been brought into some prominence through the recent action of the minister of muntions in determining that welfare supervisors shall be appointed in every national munition factory where women or young persons are employed.

Some employers may think that welfare supervision is merely a fad. This, however, is quite a mistaken view. It is not only good from the worker's standpoint, but it is thoroughly sound business from the standpoint of the employer. As a matter of fact, it is stupid to treat workers in the mass, and only through lack of insight do we fail to realize its stupidity.

For it must be remembered that a manufacturer's equipment is of two kinds—human and mechanical. What should we think of an employer who treated his machinery in the mass? As a matter of fact he watches his mechanical equipment with extraordinary care. It is continually tested to find if there is any overstrain. A man goes round with an oil can all day long to see that there is no unnecessary friction anywhere. Periodical inspections of the plant are made. And finally you have the engineer doing nothing else but seeing after the welfare of the machines. It is recognized, in a word, that each machine must be dealt with separately.

Now human beings are infinitely more complex and more delicate than machines. Notwithstanding this "hands" are taken on with but scant consideration of the particular work for which they are best suited, and little effort is made to interest them in what they are going to do, or to create in them a desire to succeed. A sensitive girl may be engaged by a rough-tempered foreman, and put to work without a word of encouragement in a great room full of strangers under the supervision of a nagging overlooker. Although she may never have been in a factory before she is expected from the first day to work a 12-hour shift, sometimes in a very bad atmosphere, and often but scanty provision is made to enable her to get a good meal in the middle of the day, amid comfortable and restful surroundings. Need we wonder at it if her work is inefficient? A girl will never do the best for her employer or for herself under such conditions.

If only employers would treat their employees with as much consideration as they do their machines they would have less difficulty in getting satisfactory output.

The editor has put to me some specific questions as to everyday difficulties. I will seek to answer them seriatim, along the lines I have indicated.

First of all, how long can women work efficiently?

It is impossible to lay down any hard and fast rule as to the number of hours girls can work with advantage. It depends upon the severity of the labor, the conditions under which the workers live at home, the transit facilities, the atmospheric conditions in the factory, and the wages paid. But, broadly speaking, I think that the demand of the workers for a 48-hour week is based upon reason. The advantage of going below it is doubtful, and I am pretty sure that, as a rule, there is little, if any, use in going much above it, except for short periods. Generally speaking, then, I should say the employer is wise who works his women and girls for 8½ hours per day from Monday to Friday, and for 5 hours on Saturday. I question whether it ever pays to keep on working girls for more than 54 hours a week. As for the 60-hour week, it is most unsatisfactory.

A short break of, say, 10 minutes in the middle of the morning is a distinct advantage. There is much evidence to show how great a relief it is to the workers, many of whom come away from home with no breakfast, or an inadequate one, and are thus enabled to get a little lunch. In some munition factories milk is being sold to the workers during this break, which is an excellent plan. In many they are allowed to go to the canteen for tea or other refreshments.

I am asked whether it is desirable for women to work at night. Certainly not; but if for any reason—as, for instance, the exigencies of war time—it is absolutely necessary, then it is far better to work women on 3 shifts of 8 hours than to work two shifts of 12 hours.

Next comes the question of canteens. Are they worth while? The Americans recognize much more fully than we do the advantages of good canteen arrangements in the works. We have all heard that "a man can be neither a statesman, a philosopher, a poet, or a lover unless he has had something to eat during the last 48 hours." This is doubtless true, but it is just as true that unless girls in a factory can get a comfortable midday meal they can not be expected to do a good afternoon's work. I have heard many employers speak of comfortable mess rooms as luxuries and fads, and of a good canteen as involving a capital expenditure which brings in no return.

Nothing is further from the truth. Employers know perfectly well that if they themselves lunch hurriedly on badly cooked and unnutritious food their work suffers, and what is true of them is true of their workers. If we want them to do a good afternoon's work we should give them a restful dinner hour and see that nutritious food is available. There is some truth in a remark I once heard that "left to herself a woman always tends to live upon cake," and this is a danger which should be guarded against in the canteens.

Another of the general conditions which a wise employer will carry out in his factory is to see that the ventilation of his workrooms is good, that they are adequately warmed, that the air is fresh, and that they are well lighted. We are quite alive to the importance of these things in our own offices. When the air is stuffy we find that our brains are sluggish, and we open the window. If we are too cold or too hot, and if the sun is shining in our eyes, or the artificial lights are too strong or too weak, we remedy the defect, because it interferes with our work.

Yet we wander through our workrooms, seeing such defects multiplied indefinitely, and wholly fail to realize that the workers are just as sensitive as we are, and that it is extremely bad business to handicap them by irritating conditions. Indeed, we grumble at the home office inspectors and call them faddists because they insist upon a certain minimum in the way of ventilation and lighting.

Turning from general conditions, which a wise welfare supervisor will constantly be watching, I should like to say a few words with regard to the more personal side of her work. Employers hardly recognize the importance of a girl's first introduction to our factories. It may make all the difference if, instead of being hurriedly engaged by a foreman, her first interview is with the welfare supervisor. The latter, after ascertaining her qualifications and deciding to employ her, can have a talk with her about her future and try to interest her in it, making her feel both that the firm intends to do "the square thing" by her, and that she must do "the square thing" by the firm. After this, for a time at least, the welfare supervisor should keep closely in touch with the newcomer, visiting her at the end of a day or two to see how she is getting on, and inquiring whether she has any difficulty that can be removed, and after this paying her periodical visits so long as may be necessary.

Great care must, of course, be taken in the selection of the supervisor. She should have a real love for girls, and be methodical and of businesslike habits, and she should in the best sense of the word be a lady. The term is no doubt ambiguous, but it does connote certain qualities of tact, gentleness, and honor, and a dignity seldom asserted and seldom challenged.

For it will be her business to keep in touch with all the girls under her charge. They should feel that she is their friend. One of the great difficulties in even the best organized establishments is to secure perfect justice in the treatment of every worker. Although the general rules may be perfectly fair and reasonable, there must always be a few exceptional cases in which a worker may have a real grievance. Yet it may be impossible for her to put the point to her overlooker. On the other hand, she will not be afraid to explain her particular grievance to a sympathetic welfare supervisor. By this means the management may frequently gain information as to these petty tyrannies and the like which occasionally lower the efficiency of a workroom in apparently mysterious fashion.

There is a rule, I believe, at a certain factory in America that no worker may start in the morning if she has any grievance or cause of irritation against the management. The employee who suffers under a sense of injury will never be able to do herself justice, argue the management. Consequently any such grievances are cleared up first thing in the morning, before the operative starts work.

There are a number of causes which may adversely affect the efficiency of women workers which a welfare supervisor can remove. For instance, a girl may be worried by ill health at home. This worry will prevent her from attaining her normal output. But a chat with the welfare supervisor will often lead to some means being found for relieving the strain upon the girl's mind. This may take the form of a suggestion from the supervisor that the firm might make a small advance to meet the abnormal expenses of the household if the case proves to be genuine. On the other hand, the mere fact that someone at the works has sympathized with the girl about her home trouble will make her feel herself to be a member of the factory family.

It would be difficult to enumerate all the direct and indirect influences which such a worker exercises over a factory. But one thing is certain. Her work not only increases the efficiency of the girls under her charge, but it tends to attract a better type of worker. Many employers can show how they have been able to obtain girls with better education and from better homes through the work of welfare supervisors at the factory. Now rough, unskilled labor is seldom cheap in the long run. And everything that tends to increase the personal responsibility and the efficiency of employees will help to give him a higher rate of output.

A good illustration of the advantage of treating employees individually instead of in the mass is in the means adopted to reduce the amount of broken time—and this is work in which a welfare supervisor may be of great assistance.

The following effective way of keeping a grip on the time broken by individuals has been adopted in a large factory, with excellent results. An attendance chart was arranged on which is entered each day every absentee. In the first column the worker's number is written, in the second her name, and against each name a square is allowed for each day of the week. If a girl is away in the morning without any reason being given, the fact is recorded by a heavy full stop in the extreme top left-hand corner of the square allocated to that day. If she is away in the afternoon a similar dot is placed in the bottom right-hand corner. Should the reason for her absence prove to be unavoidable—e. g., ill health—the dot is transformed into a cross, which represents an unavoidable absence, as distinct from unjustifiable time breaking.

Now, by looking at a chart of this sort, which extends on each page for three months, it is possible to see at a glance—

(*a*) Which girls are keeping bad time.

(*b*) What departments are keeping bad time.

(*c*) Whether time is frequently broken on any particular day, e. g., Saturday or Monday.

In the case of girls this chart should either be prepared in the welfare supervisor's office—the necessary facts being supplied daily by the time office—or if prepared elsewhere should be sent to the welfare supervisor at least once a week. It then becomes her business to take up the matter with any employee who is keeping bad time, and to find out what the real cause is and seek to remedy it.

The cause for keeping bad time usually falls under one of the following headings:

(*a*) A specific illness, such as scarlet fever, which may keep a girl away for several weeks.

(*b*) Occasional illness, which may show that the girl's general state of health is poor.

(*c*) Slackness, which may be caused by either dislike of or distaste for the work.

(*d*) Possibly demands of parents that the girl shall do housework at certain times.

It is obvious that these causes can not be remedied in any wholesale way, nor can bad time-keeping be effectively dealt with by severe disciplinary regulations. It is worth the employer's while to treat each case individually, and this can best be done by the welfare supervisor. This is much more effective than to send a clerk or a busy foreman concerned with a multitude of other matters to interview a girl who has broken time. If a tactful woman asks the girl quietly just why it is that she is breaking time she will often get an illuminating answer. If the girl is anemic or otherwise unwell she can encourage her to adopt health rules that will make her stronger. If she is merely wearied by the monotony of the work she can try and interest her in it. In any case she can get a personal approach to the girl, who knows that although the welfare supervisor is an employee of the firm she is not in the usual sense "in league" with the management. By constant care a good welfare supervisor is able materially to reduce the amount of broken time.

In addition to the chart described above, which deals with individual workers, it is worth while to prepare weekly statistics in which the average amount of broken time is shown for each department. In these statistics two sets of figures should be given. The first, a column showing the amount of time broken *from all causes*, whether satisfactory or otherwise, and whether with permission or otherwise; the second, a column from which are eliminated all absences which have extended over a whole week. These will almost certainly be due either to illness or to absence with leave, and may safely be deducted from the time unsatisfactorily accounted for.

I do not think it is worth while to attempt to distinguish statistically between satisfactory and unsatisfactory causes of broken time where this only extends to a day or two, as illness is so frequently given as the *cause* of absence when really it is only the *excuse*.

These weekly statistics are valuable means of comparing the time-keeping in each department. Where this is bad this will probably be found to be due to one or more of these causes:

(*a*) A slack foreman;
(*b*) Bad working conditions;
(*c*) Too much overtime;

any of which are capable of being remedied.

A point that arises in appointing a welfare supervisor is, of course, the cost of such an officer. But this expenditure should be considered not merely as an additional outlay, but as a legitimate expense for improving the efficiency of the staff. A small firm can generally secure a suitably-trained person for £2 per week. Larger firms should pay from £3 to £5 per week, if they desire a worker conversant with all the subtle difficulties that arise in handling large numbers of women.

If there are 500 girls working in a factory, and the management pays £150 a year for such a supervisor, she is costing the firm less than 1½d. per worker per week. If the average rate of wages is 12s. per week, the supervisor is costing the firm 1 per cent of the annual wages bill. If they are paying their girls an average of £1 per week she will only cost 0.6 per cent of the wages bill.

If, as a result of a more contented personnel, one does not get far more than 1½d. of extra output per week from each girl, then something is very much amiss. It is certain that such a worker is an economy in every sense of the word. She saves the manager from worrying over the thousand and one points that can be dealt with by women far better than by the best business man. Consequently she frees the executives for more important work.

It is clear that the whole success of welfare supervision will depend upon two things—firstly, the employer's recognition of its importance, and, secondly, the personality of the welfare supervisor.

After more than 20 years' experience of welfare supervision in my own factory, I am thoroughly convinced of the wisdom of appointing welfare supervisors where large numbers of girls are employed. They not only promote the well-being, the health, and efficiency of the girls, but they save the management an enormous amount of trouble. And it must be remembered that an increase of efficiency is important not only to employers, but also to the workers; for there can not be progressive improvement in wages unless there is progressive improvement in methods of production.

WELFARE WORK IN GREAT BRITAIN.

At no time in the industrial history of Great Britain has the entrance of women and girls into industry, to supplement or take the place of men, assumed such magnitude as now made necessary by the requirements of war. In the long list of occupations constituting men's work primarily, those in which female labor has not appeared may be regarded as exceptions. Unfit physically and untrained to meet the demands made upon them by the hard manual labor which, because of high wages, constitutes a new and attractive source of income, these workers are compelled to undergo the wearying physical strain aggravated by long hours, improper or inadequate sanitary conditions, and the extreme fatigue produced by industrial processes to which they are wholly unaccustomed, which must be minimized, if impossible of elimination, if health is to be conserved and the greatest efficiency achieved. Employers recognizing this fact have in many instances come to appreciate the importance of dealing with their employees individually instead of in the mass, studying their needs through thoroughly organized and equipped welfare departments, in the effort to increase their personal responsibility and efficiency, knowing from experience that such a course will help to make a higher rate of output. Encouragement to this end has been supplied by the British ministry of munitions, which, in dealing with the great problems of industrial endeavor accentuated by war conditions, has determined the value of protecting the health of workers and given to employers the benefit of its suggestions and recommendations in the hope that the nation may not ultimately suffer from the rather unusual and extraordinary demands of the present as affecting women. The ministry has decided that welfare supervisors shall be appointed in every national munitions factory where women or young persons are employed, and at the head of its welfare department it has placed B. Seerbohm Rowntree, an employer, who, after 20 years' experience with welfare supervision in his own factory, announces:

> I am thoroughly convinced of the wisdom of appointing welfare supervisors where large numbers of girls are employed. They not only promote the well-being and health and efficiency of our girls but they save the management an enormous amount of trouble. And it must be remembered that an increase of efficiency is important not only to employers but also to workers, for there can not be progressive improvement in wages unless there is progressive improvement in methods of production.

Connected with this welfare department of the ministry of munitions is Miss E. Dorothea Proud, a graduate of the University of Adelaide, Australia, who, in a recently published volume,[1] brings together the results of inquiry and research into the conditions of welfare work as carried on in the factories of Australia and Great Britain. Mr. David Lloyd George, minister of munitions, in his foreword says:

> It may well be that when the tumult of war is a distant echo and the making of munitions a nightmare of the past, the effort now being made to soften asperities, to secure the welfare of the workers, and to build a bridge of sympathy and understanding between employers and employed will have left behind results of permanent and enduring value to the workers, to the Nation, and to mankind at large. This volume will be found very helpful to those who desire to do their part in the good work now. * * * Her [Miss Proud's] knowledge of welfare work is therefore unique, and her book bids fair to become the standard work on the subject. I warmly commend it to employers, to lady superintendents, and to all those members of the general public who care for the welfare of the workers in our factories.

The author defines welfare work as consisting of "voluntary efforts on the part of employers to improve, within the existing industrial system, the conditions of employment in their own factories," explaining that this "definition excludes attempts to change the established social order, but neither limits the notion of 'employer' nor postulates the nature of his motives nor his success. By enforcing minimum requirements legislation sets the standard adopted for lack of a better one, for factory legislation and welfare work are mutually dependent, as experiments of individuals guide the course of legislation, and legislation influences the progress of welfare work." The study is presented in two parts, followed by 13 chapters appearing as appendixes.

In Part I the author notes the social function of the employer in a capitalistic state and his influence on factory legislation, showing that legislation providing restrictive regulations for the protection of workers, prompted by an awakened public opinion, has followed upon experiments by employers who have fulfilled their social function by demonstrating the practicability of improving conditions of employment.

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[1] Welfare work. Employers' experiments for improving welfare work in factories, by E. Dorothea Proud. London, G. Bell & Sons (Ltd.), 1916. xvii, 368 pp. 7s. 6d. net.

> In theory and in practice it appears that the best employers have played a fundamental part in the gradual raising of the worker's standard of living. Indeed, step by step the path of progress has been marked out by employers, through their individual efforts made from time to time throughout the nineteenth century.

These efforts of employers are traced from the time when Sir Robert Peel, an employer, in 1802, first spoke in favor of factory legislation, although it is stated that self-interest was his motive, down to 1847, when, with the passing of the 10-hour bill, "the principle of factory legislation as we understand it to-day may be said to have been effectively adopted by Parliament." Not only in public, but from within the factory, employers by their experiments found it necessary to convince the country that a trade injurious to the workers is unprofitable to the Nation and that legislation does not destroy industry. The suggestion made by practical employers with respect to the appointment of paid inspectors, adopted by the factory commission in 1833, "made factory legislation effective in the United Kingdom. In methods of administration of the acts there has been no other step comparable with this in importance," for "with the advent of the expert inspector and the issue of regular reports on factories there was made a direct channel of communication between the best employers and the legislature. * * * Their recommendations were undoubtedly received with respect, and formed the basis for further legislation." Thus the interests of employees have been advanced.

With the establishment of the principle of factory legislation, so far as the hours of labor for women, young persons, and children were concerned, it became necessary to expand its scope, and as the demand arose the law was extended, trade by trade, the subsequent details of legislation being placed in the hands of experts in the home office instead of Parliament, in recognition of the fact that regulation can only proceed where there is evidence that provisions are "reasonably practicable." Thus it is believed that conferences of inspectors with employers and operatives in trades have hastened the adoption of appropriate regulations, but that general progress depends on individual employers whose experiments are of increasing significance. The attitude of employers toward factory legislation also seems to have undergone a change. "Not only is the economy of high wages recognized, but welfare work may help to maintain industrial peace if the workers can be convinced that 'philanthropy' is not the motive force. Since industrial legislation benefits the nation, the fact that welfare work pays is, in so far as it destroys the motive which makes employers demand legislation, regarded as a national danger," which is increased by the fact that "esprit de corps and self-interest cooperate to prevent progressive employers from urging the public to take steps to reduce their beneficent provisions to the level of mediocrity by means of legislation."

So far as the workers themselves are concerned, Miss Proud points out that they seem inclined to look with disfavor upon welfare work in the fear that (1) it tends to make individuals content with their lot and callous as to the lot of their fellows, thus weakening "the social instinct, which is humanity's natural safeguard"; and (2) because they suspect philanthropy—"they do not desire charity but justice." These fears, however, do not appear to the author to be valid, because, in the first place, "welfare work does not presuppose industrial peace, nor is it incompatible with trade-unionism," and, in the second place, "philanthropy is not welfare work."

> Far from being a "sleeping draught" for the workers, welfare work in its best forms encourages their aspirations and stimulates in them desires for better conditions and more adequate opportunities of self-realization.

Prompted by humanitarian and commercial considerations, the welfare department has been made one of the specialized departments in many establishments where employers have been induced to study working conditions with a view to their improvement. The advantages of the welfare department seem to have been recognized both by employers and by the Government, and in the selection of welfare supervisors it is regarded as important that they be persons of tact, capacity, and suitability for the work required as well as persons prepared to recognize the individuality of each worker, for "the essence of welfare work is its individuality."

In Part II the author takes up the more practical aspects of welfare work in its relation to workers, presenting a chapter on the industrial environment, including the influence upon workpeople of proper conditions of ventilation, lighting, sanitation, provisions for rest, temperature, etc.; a chapter on wages and hours; one indicating the incidental aids to welfare, such as health, recreation, food, baths, gymnasiums, and housing; and a final chapter on the scope of the welfare department.

It is regarded as important that workers be selected with some appreciation of their fitness for the job—a matter which should receive the attention of the nation, since its wealth depends upon the workers' health. In this connection the absence of mortality statistics among women in industry is commented upon, and since "women are habitually less thoughtful than men in matters concerning their own health" it "must needs be of paramount importance to the nation" to safeguard their health by legislation, "which is still unsatisfactory."

> The ignorance and the apathy which exist with regard to the appropriateness of work for women are found in varying degree throughout the whole field of industry. The community as a whole gives no guidance as to the suitability of various kinds of work to varying temperament and ability, but leaves it to be determined by accident, or, at best, by the care of more or less far-sighted employers.

However, it is noted that modern employers in their endeavor to select efficient workers have set up certain educational, physical, and moral standards, while some are appreciating the value of selecting employees temperamentally fitted for the work. "The nation loses unless workers are placed where their labor is most effective," and to set up and enforce in behalf of employers the standards indicated is regarded as the obvious duty of a welfare department.

> Without overriding departmental managers a centralized department may be useful in preventing favoritism, and it can also take into account the temperaments of those working together. * * * National recognition of the importance of psychological research is needed and a wider appreciation of the influence of employment on physical, mental, psychological, and, perhaps, moral well-being. This brings us again to the necessity for careful and complete occupational statistics.

Miss Proud comments upon the susceptibility of workers to industrial environment, which she divides into three parts: (1) Elements of which they are conscious, (2) elements of which they are not conscious, and (3) elements of which they are subconscious, and states that there is no scientifically defined minimum standard for environment in general, while the legal standards are indefinite and more or less vague in their terms. Furthermore, experts seem to differ as to what tests should be applied in determining standards, but the importance of proper ventilation, lighting, cleanliness, sanitation, provision against overcrowding, and the general appearance of the factory is being recognized by the employers, and considerable progress is noted. The author calls attention particularly to the work being done by welfare supervisors in considering the effect on workers of machines, guards, the provision and use of first-aid appliances; in improving conditions in lavatories and cloakrooms; and in controlling, in many instances, the dining arrangements with a view to making them pleasant and comfortable and perhaps combining them with a training school for the factory girls. The providing of rest rooms, both for emergency needs and to furnish a retiring place for intermittent workers, is regarded as very desirable.

In her discussion of the question of wages the author dwells upon its relation to the consciousness of the workers and states that attempts to make the existing wage system work smoothly are feared by workers lest, by accepting anything called welfare work, they seem to acknowledge that their wages are sufficient. They are more interested in the money wage and in the adjustment of rates to meet variations in the standard of living, and a knowledge of this relation appears to be essential to the welfare department. The differing effects produced upon workers as a result of payment of wages by time and by piece seem to merit the consideration of the welfare department in order that the good elements of each method may be combined and thus more nearly meet the temperamental characteristics of each worker. When advising on matters of wages welfare supervisors should consider both the workers' and the employers' interests. Experiments seem to indicate that "the most satisfactory wage is one in which a fixed minimum is guaranteed, and the maximum reward is given for that effort which is the greatest consistent with health and comfort."

In noting a tendency toward a shorter workday the author refers to the fact that at the outbreak of the war it became necessary to determine the relation of hours to output, the experiments conducted in this connection indicating that continued overtime does not proportionately increase output. The welfare department, it is suggested, might well give attention to ascertaining the effects of altering hours of labor with a view to securing industrial efficiency. In considering the advantages and disadvantages following upon shorter hours the question of strain and speeding up will need to be taken into account. Then, too, the matter of spells and breaks is important, and from experiments it seems that the five-hour spell permitted by law is coming to be regarded as excessive. Also it appears that where holidays have been granted and paid for on suitable conditions, improvements in conduct, time keeping, and workmanship have been progressive.

Having considered the more fundamental matters of welfare work—wages, hours, and workroom conditions—the author devotes a large portion of her book to a review of incidental aids to welfare which she groups under three heads according to whether they affect the physical well-being, the mental development, or the personal dignity of the employee. Under the first it is noted that there are few legal provisions for the health of factory workers, but that doctors and nurses are frequently engaged by employers with beneficial results to themselves as well as to their employees. At this point the welfare secretary is expected to guard the worker from overstrain and, when necessary, arrange for his care in a convalescent home or hospital. Opportunities for recreation are essential.

> It is gradually being recognized that the physical fitness of the worker has an important bearing on the output of the factory, and so it is found that dining rooms and restaurants are slowly becoming more general, more especially in * * * factories * * * so situated that the workers can not return home readily for their meals.

In some factories baths of various kinds are to be found—those needed because of the nature of the work performed or because of the absence of baths at home, and those provided for recreation—while other factories provide gymnasiums. On account of the war the housing of workers has presented a most urgent problem because of the gathering together of a large number of people into spaces which afford no adequate accommodation, and to deal with this problem becomes the duty of the welfare department.

When it comes to mental development of workers, it seems that in the present state of English law "the time which can be devoted to education is largely a matter of voluntary concession on the part of the employer, and therefore he is the only person who can make continued education compulsory. To spend six hours per week in a classroom can be made, and sometimes is made, a condition of employment." It is believed, however, that provision might be made by law for the combined education and employment of young persons between 14 and 19 years of age, the advantage of the factory school being "that it greatly facilitates the arrangements between schoolmaster and foremen," while the disadvantages suggested are that (1) opportunity for social intercourse is restricted, (2) the employer's influence may be excessive, and (3) the comparatively small numbers may make the expense greater, which, however, need not affect the choice of teachers. Care should be exercised in order that children may not be compelled to devote certain hours to study without some concession as to hours of employment, and the welfare department is cautioned to interest itself in studying the hours of work in relation to fatigue to see that they are such as to permit of additional demands upon the time and energy of workers. Opinion seems to differ as to the advisability of making education compulsory.

The author thinks it important that employers should consider the personal feelings of workers, extending to them more courtesy and wider sympathy and intrusting to them some measure of discipline and responsibility and authority. Some guaranty as to continuity of employment and provision for insurance of employees would seem to make for greater efficiency, but throughout all the relations between employer and employee "despotism and charity alike must give way to justice."

In all matters pertaining to factory efficiency growing out of the relation of work to worker and industrial environment, problems of importance both to employers and employees are constantly arising which demand careful consideration and wise solution. This result can best be effectuated, in the opinion of the author, through a welfare department thoroughly organized and equipped, under the personal direction of an expert welfare secretary endowed with business capacity, a knowledge of work done in the factory, sympathetic understanding of workers, and tact, who shall devote his entire time to the best interests of workers and the factory management alike. To accomplish the largest results the factory must be properly equipped for welfare work; the secretary must adjust arrangements to meet changing needs, keep records of workers, provisionally select employees, leaving the final choice to the department manager, and exercise a general supervision over wages and hours of workers, their instruction, health, recreation, and insurance.

> He is in a general way responsible for discipline in the factory and for considerate treatment of workers. He must reconcile the demands of the employer with the rights and feelings of the workers. Only in so far as he gains the confidence of the workers does he become their representative.

Opportunity for exchange of ideas between welfare supervisors is deemed of value.

> The welfare secretary's duties become increasingly important and increasingly difficult as they pass beyond the range of regulation and enter upon the realm of personality, where it is necessary to adapt, to the individual, arrangements made for the many. This is the service which the welfare secretary renders the community—to restore the personal element, lost in the rush of material progress—to socialize the economic relation of employer and employed.

WOMAN'S WAR WORK IN GREAT BRITAIN.

A number of official British reports have been issued since the outbreak of the war giving the results of studies and investigations of the replacement of men by women in munition factories and in the various lines of industrial pursuits. From these reports it appears that through the employment of women, who have shown a disposition to undertake practically every form of work where their services could be accepted, large numbers of men eligible for military duty have been released, and the opinion seems to prevail that the necessity of replacing wastage in the army will eventually compel the release of all men who can be replaced by women, a condition which prompts the War Office to suggest the advisability of employers training temporary substitutes as early as possible in order to avoid any falling off in production.

It appears that this increased employment of women has made steady progress since the beginning of the war—a fact indicated by the following table, based upon periodical returns made by employers to the employment department of the British Board of Trade and taken from the Board of Trade Labor Gazette for October, 1916, page, 357.

ESTIMATED NUMBER OF WOMEN EMPLOYED IN JULY, 1914, AND ESTIMATED INCREASE SINCE THAT DATE, SHOWING ALSO ESTIMATED NUMBER OF WOMEN REPORTED AS REPLACING MEN.

Item.	Estimated number of females employed in July, 1914.	Estimated increase in the number of females employed since July, 1914.		Estimated number of females reported by employers as directly replacing males.	
		April, 1916.	July, 1916.	April, 1916.	July, 1916.
1. Industrial occupations	2,117,000	275,000	362,000	213,000	263,000
2. Commercial occupations	454,000	166,000	198,000	152,000	201,000
3. Professional occupations (mainly clerks)	67,500	13,000	15,000	12,000	15,000
4. Banking and finance (mainly clerks)	9,500	23,000	30,000	21,000	26,000
5. Hotels, places of entertainment, etc	175,000	12,000	19,000	27,000	31,000
6. Agriculture (Great Britain only)	130,000	[1] 14,000	66,000	37,000	66,000
7. Transport (other than municipal)	15,000	23,000	31,000	24,000	31,000
8. Civil service	66,000	39,000	48,000	30,000	38,000
9. Arsenals, dockyards, etc	2,000	25,000	69,000	13,000	69,000
10. Local Government (including teachers and municipal transport workers)	184,000	21,000	28,000	18,000	26,000
Total	[2] 3,219,000	583,000	866,000	547,000	766,000

[1] This is a decrease which the report says is due to the seasonal character of the occupation; the number employed is an increase if compared with April, 1916. [As given in the original, evidently April, 1914, is intended.]

[2] As printed in the original; the sum of these figures is 3,220,000.

These estimates, it is explained, relate to employed persons, excluding outworkers, and the women are classified according to the employers' position, e. g., a factory clerk appears under industrial occupations, and a municipal tram conductor under local government. In connection with the publication of this table it is noted that—

> Since the war about 866,000 additional women and girls, or 27 per cent of the numbers employed in July, 1914, have been drawn into the various occupations included in the table above. The figures do not include domestic service, employment in small workshops and workrooms in the dressmaking trade, and in military, naval, and Red Cross and St. John's hospitals. In the case of the two former, there has been a big displacement of female labor since the war, and it is estimated that there has been a decrease of about 150,000 in the number of women and girls employed. On the other hand, the number of women employed in attending sick and wounded soldiers and sailors at any particular time is now about 27,000 greater than before the war. The net result of this is to show an increase of 738,000 in the total number of women engaged in occupations outside their own homes. It must be borne in mind, however, that a great part of the work previously done by the domestic servants who have gone into other occupations is now performed by unpaid labor.

In groups 1 and 9 a very large proportion of the increase is, of course, due to the advent of the woman munition worker. Many of these women are not, strictly speaking, replacing the men, but they are doing what was before the war generally regarded as men's work. But munition work is only a part of women's industrial activity. There are very few industries or occupations in which the number of women has not increased. There are few in which some direct substitution of female for male labor has not taken place. The chief instances of decline in numbers of women employed are domestic service and employment in small dressmaking workrooms. Other important industries which show a numerical decline are laundry work, dressmaking, confectionery, printing and bookbinding, linen, lace, and silk, but in all these groups some women are directly replacing men, and in many individual firms in these and other groups a decline in the number of women simply means that some of the women have left to go to men's work and have not been replaced.

Women are directly replacing men (only in comparatively small numbers) even in building, mining, and quarrying. They are replacing them in considerable numbers in most of the metal industries, though not on the main processes in iron and steel works. In the cotton trade no less than 25,000 females are returned as directly replacing males, though in other textile industries (except hosiery) progress has been less marked. In the food trades there have been very interesting cases of substitution. In grain milling the number of women and girls employed has risen since July, 1914, from 2,000 to 6,000; in sugar refining from 1,000 to 2,000; and in brewing from 8,000 to 18,000; the increase in these trades is almost entirely due to the direct replacement of men by women. Women are also doing men's work to an appreciable degree in tanning and leather working, sawmilling and woodworking, glass, china, earthen ware, and rubber. Very often, however, it is still found that while some firms have fully realized the possibilities of substitution, others in the same trade have hardly made a beginning with it.

The employment of women in what is mainly clerical work, groups 2, 3, 4 in the table, requires little comment; the most striking new development here is the introduction of women clerks into banks and financial houses. In agriculture the process of substitution made slow progress during the first eighteen months of the war, but an acceleration is now noticeable. Besides the regular women workers there is a large increase in the number of fruit pickers, harvesters, and other casuals.

Railway employment furnishes a particularly interesting series of experiments in female labor. Before the war the railway companies only employed about 11,000 women—clerks, cleaners, attendants, etc. Approximately 33,000 are now employed. The kind and amount of substitution carried out varies from one railway company to another. One has increased the number of its women clerks from 70 to 1,526, and employs also 18 women ticket collectors, 186 carriage cleaners, 55 engine cleaners, and 454 porters. Another, with neither women ticket collectors nor porters, has 480 women carriage cleaners, 475 engine cleaners, 226 laborers in the workshops, and 37 other women laborers. Yet another, with no women engine cleaners or laborers, has 142 ticket collectors. In other branches of transport the most interesting experiments have been made by local authorities, and the resulting figures are included in group 10. Everywhere women are largely employed in the tramway departments as cleaners and conductors, and in some districts as drivers. Glasgow led the way in the use of women tram drivers, but several other towns in Scotland and one or two in England and Wales are now employing them. Municipal employment of women also includes work in power stations, on sewage farms, in gas works, in parks, and in road cleaning and scavenging, together with much clerical and educational work. The great increase in the number of women in the service of the Central Government (group 8) is mainly connected with clerical and postal work.

An information bureau for the collection and circulation of information as to the replacement of male by female labor has been established by the board of trade employment department at the Victoria and Albert Museum, South Kensington. From this bureau employers and others interested in the question of substitution can obtain particulars as to what is being done to extend the employment of women throughout the country.

The Home Office and the Board of Trade have also issued a series of pamphlets dealing with the possibilities of substitution in various industries. These pamphlets show the various branches of men's work which are, in the main, or under conditions which are indicated, considered suitable for women by the factory inspectors, and which women are successfully undertaking in various factories and workshops. The pamphlets also referred to the special exemptions from the provisions of the factory and workshops acts which have been sanctioned by the home office with a view to rendering possible the employment of women in this work.

The War Office has supplemented the information published by the Home Office and the Board of Trade by issuing in September, 1916, a 94-page pamphlet[1] setting forth in a series of 72 photographs the work being done by women in maintaining the industries and export trade of the United Kingdom, and containing a list of trades and processes in which women are successfully employed in temporary replacement of men, and also a list of officials whose assistance is available to recruiting officers and military representatives on questions affecting the supply of women workers to release men for the Army and the conditions of their employment. This information, it is stated, has been officially compiled for the use of recruiting officers, military representatives, and tribunals who will "find the lists and examples given in this book of service in dealing with claims put forward on grounds of indispensability, while employers of labor may find new ways of increasing their output in spite of the shortage of male labor." In the preface the women of Great Britain and the employers of labor are cautioned to remember that—

> (*a*) No man who is eligible for military service should be retained in civil employment if his place can be temporarily filled by a woman or by a man who is ineligible for military service.
>
> (*b*) No man who is ineligible for military service should be retained on work which can be performed by a woman (for the duration of the war) if the man himself can be utilized to release to the colors one who is eligible for military service and who can not be satisfactorily replaced by a woman.

In presenting the names of trades and processes it is explained that their inclusion does not necessarily imply that every man stated to be performing that process can be replaced by a woman, since the possibility of actual replacement depends in every case upon the particular circumstances of the case, including such matters as the extent to which substitution had already been carried in the factory, the availability of suitable women for the work, or (in the case of agriculture) the nature of the land.

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[1] Great Britain. War Office. Woman's War Work. London, September, 1916. 94 pp. 72 illustrations.

Among the employments in which women are said to be successfully taking the place of men are the chemical, clothing, food, textile, paper and printing, and woodworking trades, certain nonindustrial occupations, agriculture, and munitions work. In the latter are included the following chief trades: Aeroplane manufacture, ammunition manufacture, artillery manufacture, brick making, explosives manufacture, electrical trades (including telephone, telegraph, and wireless), engineering generally, instrument making (optical and scientific), leather and canvas goods manufacture, marine engineering, mechanical engineering, metal trades, rubber manufacture, shipbuilding, soap manufacture, and woodworking.

Most of the pamphlet is devoted to illustrations showing women at work at the various occupations listed, including handling of farm machinery, care of horses, harvesting, loading and stacking crops, handling coal, barrowing coke, stoking, cleaning railroad cars and locomotives, street sweeping, handling barrels and cleaning vats in breweries, making ammunition, slaughtering, driving vans, baking, tending shop, finishing pianos, making boiler lagging, working in radiator factories, modeling artificial teeth in wax, cleaning windows, driving steam rollers, acting as postmen, handling freight in railroad stations, repairing seats in cars, working in newspaper offices, handling leather in tanyards, working on motorcycles, digging clay, working in glass factories, handling steel bars, rods, and pipes in shipyards, and barrowing in flour mills.

JUVENILE EMPLOYMENT IN GREAT BRITAIN.

One of the war problems confronting the British ministry of munitions, as disclosed by memorandum No. 13 prepared by the health of munition workers committee and issued in August of this year,[1] is that presented by the employment of children, not so much in textile trades where under the factory and workshops act their employment has been regulated for many years, but more particularly in certain nontextile processes, including the manufacture of percussion caps and of cartridges, and in other occupations incident to the manufacture of war supplies. It appears from this memorandum that the committee regards it as extremely important that the nation, at a time when the war is destroying so much of its manhood, should guard the rising generation not only against immediate breakdown but also against the imposition of strains which may stunt future growth and development. Although signs of immediate breakdown are not generally apparent, the committee quotes from the annual report for 1915 of the chief inspector of factories to indicate the effect of long hours of work by day or night:

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[1] Great Britain. Ministry of Munitions. Health of munition workers committee. Juvenile Employment. Memorandum No. 13. London, August, 1916. 8 pp.

> Very young girls show almost immediately * * * symptoms of lassitude, exhaustion, and impaired vitality under the influence of employment at night. A very strong similar impression was made on me by the appearance of large numbers of young boys who had been working at munitions for a long time on alternate night and day shifts.

Conditions outside the factories, it is admitted, contribute to the fatigue of juvenile workers. Thus in the report above referred to it is noted that—

> Of the boys it may be said for the most part that they are "so spiritless, so dull, so dead in look, so woebegone and attacked with weariness to a dulling of their spirits" as to compel attention. These conditions are attributable in very large measure to the conditions outside the workshop, many of them going to bed very late, due to a want of proper parental control.

It has to be remembered, declares the committee, that boys and girls need sufficient reserve energy not only for the maintenance of health but for growth. "Even under normal conditions there is some danger of juvenile employment adversely affecting physique, and this danger is materially increased by the present conditions of employment."

The committee regards opportunity for recreation as highly important and refers favorably to that portion of the report of the chief inspector of factories which states that requests for Saturday afternoon work have become less common and that there seems to be a more general recognition of the advantage of the week-end rest. "Recreation is necessary not only for the physical well-being of the boys and girls but also as a healthy relief from the monotony of work."

The prevalence of night work prompted the committee to give some attention to the question of sleep, and it was found that many of the children workers were suffering curtailment of this important means of recuperation.

> * * * the home conditions leave much to be desired, even where the wages earned are high. Thus an inquiry made at a large munitions center showed that out of 33 boys employed at one factory only 3 had a room to themselves, and the majority shared a bed with at least one other person. In a number of cases three persons occupied a single bed. * * * A boy aged 14 stated that his average wage was 19s. [$4.62] weekly. He slept in the same bed with two young men, each earning about £2 [$9.73] a week; also, in the

same room, but in another bed, two young girls slept. A boy aged 16, earning about 22s. [$5.35] weekly, slept in a bed with another boy. In another bed in the same room a boy and a girl slept.

The exigencies of war have led the secretary of state to relax the restrictions governing the employment of boys and girls under 18 years of age, as provided in the factory and workshops act, 1901. Under that act such children may be employed 60 hours a week, and, subject to some exceptions in the case of boys, all night work and Sunday work is prohibited, as also is overtime. The memorandum notes, however, that the weekly hours have frequently been increased to 67; night work has been common; Sunday work has also been allowed.

> The problem of the limitation of the hours for which boys are employed is one of special difficulty, owing both to dearth of labor available and to the extent to which they are employed to assist men; in the absence of the boys the work of the men may be hindered or altogether stopped. The demand for adult male labor both for industry and for the army is so acute that any substitution of adult for boy labor is impracticable.

An extension of weekly hours beyond 60 can only be obtained by increasing the length of the working-day or by reducing the week-end rest; and since the committee believes that the strain thus imposed would not be justified, except in rare instances, it strongly recommends that every effort should be made to restrict the employment of all boys under 16 within the limits of 60 hours, even at the cost of some inconvenience to male labor. As to the employment of girls, it is stated that at a number of factories the three-shift system has been introduced, and in works where this has not been found practicable the weekly hours have frequently been kept below 60.

The committee records a disinclination to recommend a prohibition of the extension of daily hours of labor beyond the 12 (8 on Saturdays) provided in the factory and workshops act, but suggests that such extension, if the weekly hours are limited to 60, must be made by a corresponding reduction in the hours of work on Saturday or on other days of the week, thus providing an opportunity for exercise in the open air which might not otherwise be available. Sudden emergencies in factory operation may demand an extension of the hours beyond 12, and such an extension, it is believed, will not do harm provided, (a) the maximum weekly hours already recommended are not exceeded and that (b) overtime employment is concentrated on not more than three evenings in any week, and, so far as possible, not on consecutive evenings.

Comparatively little work is performed by children on Sunday, according to the memorandum, and the committee emphasizes its argument in favor of the elimination of Sunday work, as set forth in its memorandum No. 1, on "Sunday labor."[1] As to nightwork, the committee calls attention to serious objections to it as outlined in its memoranda on "Employment of women" and "Hours of work,"[2] and states that "girls under 18 and boys under 16 should only be employed at night, if other labor can not be obtained. Wherever possible it should be stopped." Working for a continuous period of as much as five hours (the maximum legal period) without a break, even though brief, to afford opportunity for rest and recovery from fatigue and the monotony of work and for refreshment, is deprecated. In addition to the ordinary holidays, boys and girls are likely to benefit greatly by occasional opportunities for a holiday of longer duration.

Welfare supervision of girls seems to have received more attention than such work among boys, but a tendency of employers to regard the health of boys with greater consideration is noted. If fatigue, sickness, or home troubles cause boys to leave work after a few days of employment, it becomes necessary to ascertain the reasons underlying discontent, and for this purpose the welfare department of the ministry of munitions has recommended the deputizing of a welfare supervisor to study the problem,[3] and outlines his duties as follows:

1. To become acquainted with all boys when first employed, to be present at the medical examination by the factory surgeon, to note any matters needing attention, to arrange for the reexamination of special cases.
2. To visit cases of sickness and to investigate other causes of irregular attendance and of complaints in regard to work.
3. To receive complaints made by boys and their parents and to dispose of misunderstandings.
4. To be consulted before any boy is dismissed.
5. To watch the conditions of housing and transit and the facilities for obtaining food.
6. To supervise and promote arrangements for saving.
7. To seek facilities for recreation and to organize their use. In one case, quoted by a witness, an excellent recreation ground was provided by a firm, but was at present unused largely owing to the lack of anyone to organize its use.

It is believed important to provide means for instructing the children in the best methods of performing their work, and also in its aim and purpose, in order to stimulate interest and relieve monotony as well as make them proficient.

The necessity for adequate canteen facilities is emphasized, whereby good food may be obtained and eaten under restful conditions.

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[1] For a digest of this memorandum, see MONTHLY REVIEW for May, 1916, p. 66.

[2] For a digest of these memoranda, see MONTHLY REVIEW for June, 1916, pp. 74–79.

[3] The committee's memorandum No. 2 on "Welfare supervision" was noted in the MONTHLY REVIEW for May, 1916, p. 68.

In order that the high wages commonly earned by boys and girls under present conditions may not encourage undue indulgence, extravagance, and thriftlessness, the committee urges that means be adopted to induce the children to save a portion of their earnings, the collection of deposits being placed in the hands of the welfare supervisor or some other person who through his acquaintance with the boy and his home can advise him as to the amount which may properly be put by from one week to another.

> Under existing conditions of employment and with the urgent demand for juvenile labor, special care is necessary to prevent boys and girls entering employments for which they are physically unsuited. * * * Once a boy or girl has been admitted to work, the welfare supervisor has many opportunities for guarding their health and physical fitness. The less robust should be given work within their powers. The effects of nightwork on individuals should be noted and arrangements should be made for those adversely affected to be employed only during the day. * * * The maintenance of a high standard of personal cleanliness and the provision of suitable clothing have an important influence on health, and merit the careful attention of the welfare supervisor. * * * Records, if carefully kept, should not only be of immediate value as giving evidence of the presence of an undue strain, but may prove of more permanent value as throwing light on the many difficult problems arising out of the effect of occupation upon health.

This memorandum by the health of munition workers' committee does not indicate the extent of juvenile labor either in normal times or as a result of the unusual demands for employment of children created by the war. Such information, so far as available, is included in the annual report of the chief medical officer of the board of education for 1915,[1] who states that under normal conditions about 450,000 children pass out of the elementary schools annually at or about the age of 14, and that this figure appears to have been far exceeded during 1915 and since. This report suggests that approximately 45,000 children ranging in age from 12 to 15 years in excess of the normal number permanently left school for employment during the year 1915, and that the extent of juvenile employment existing to-day is probably much greater than during the year reviewed. Moreover, this figure, it is explained, refers almost exclusively to those legally entitled to leave school and does not include the large number of children normally liable to attend school but excused for longer or shorter periods by local education authorities for agricultural and other employment, nor does it include half-timers.

More definite information as to agricultural employment appears to have been gathered, indicating that on May 31, 1916, not less than 15,000 children were excused for the purpose of whole-time employment alone. A tendency to excuse for employment children under

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[1] A brief outline of this report appears in the October, 1916, issue of the Board of Trade Labor Gazette, p. 358.

12 is noted, and the report states that it is very doubtful whether children under 12 thus excused will ever return to school. That children have withdrawn from school since the outbreak of the war at an earlier age than that contemplated by the attendance laws appears evident, in the opinion of the chief medical officer. In this situation the children would seem to be exposed to conditions of strain detrimental to physical welfare, and as a means to conserve their health the following recommendations are presented as essential:

1. Careful examination of children leaving school.
2. Similar examination of those applying for labor certificates.
3. Medical supervision of children employed out of school hours.
4. Coordination of school medical work with juvenile employment committees.

This latter recommendation is believed to be important because if carried out children may be directed to occupations suitable to their mental and physical capacities. This point has been emphasized in the excerpt above quoted from the memorandum of the health of munition workers' committee.

SOME NEW STUDIES OF INDUSTRIAL FATIGUE.

One of the subjects which, since the outbreak of the war, has received careful and detailed study by the British Home Office, particularly because of its importance as a factor in the manufacture of munitions as affecting both men and women workers, is that of industrial fatigue in its psychological and physiological aspects. This matter also received the attention of the British Association for the Advancement of Science, which, in 1915 and again this year, published reports on the question of fatigue from the economic standpoint.[1]

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[1] The conclusions drawn from the study of fatigue as presented in the first interim report of the association are summarized on page 40 of that report, following a statement to the effect that outside of a few individual studies mentioned "scientific management has perhaps not spent enough time searching scientifically for the laws of fatigue before setting its standard intensity of work; yet if once these laws are discovered, then it is only to a really scientific management that we can look for the application of the discovery." The significance to industrial organization of the researches chronicled in the report are then sketched in the following sequence:

First. The importance of the rôle played by fatigue and other inner states of the individual worker. It is not a monopoly of mental work to be influenced in quantity and quality by the human disposition. For the efficient management and organization of factory and office account must be taken of the human element just as much as of the material and the machine.

Second. The importance of the rest pause. A break in the work would seem to shed its influence all around; it causes a bracing excitement that avoids accidents beforehand and brings on after it a new lease of working capacity. More important than the length of working day seems the length of spell—the splitting up, the breaking up of continuous periods of work.

Third. The importance of the nature of the work in modifying the onset of fatigue. In uniform repetition work causing "subjective" feelings of monotony "objective" fatigue seems far less effective than in the nerve-taxing work of attending to a loom or of labeling and soldering accurately in place.

Fourth, and finally. The importance of taking account of and studying fatigue, and of adapting accordingly the hours of labor in each kind of work.

Three reports on industrial fatigue have been issued by the Home Office. The first is entitled "Industrial fatigue and its causes," being memorandum No. 7 published by the health of munition workers committee,[1] and the others are the first and second interim reports on an investigation of industrial fatigue by physiological methods, issued respectively in August, 1915, and August, 1916, the latter report forming the basis of the present review.[2]

The experiments recounted in this report were made in seven factories, most of the time, however, being devoted to two factories—one employing about 2,000 males and females in the manufacture of surgical dressings for the army, all processes required to produce the various articles being carried on in the mill, and the other an engineering works employing about 600 men, besides many women, and engaged in the manufacture of war materials of various kinds. The results of these studies are presented under three sections.

Section I considers fatigue as a result of overtime and outlines its progressive development throughout the week, the concomitant diminution in the power of recovery, the development of extra fatigue as a result of overtime, the disadvantage of working consecutive overtime days, the development of fatigue during day and night shifts with arguments for their less frequent reversal, the process of ordinary recovery from fatigue, recovery during rest intervals, and recovery complicated by illness. The influence of fatigue and of overtime upon output is taken up in Section II, where special attention is directed to the existence of periods of high and low output, especially where overtime is worked, to the gradual change in the period of lowest output as fatigue develops during the week, to the fact that overtime invariably produces the lowest output and that this may be traced to fatigue, and to the fact that overtime may lead not to an increase but to a diminution of output. The influence of home conditions on the development of fatigue and upon consequent diminution of output is mentioned, and the value of rest intervals is emphasized. The lower efficiency exhibited by workers on Monday morning is noted, which seems to offer a strong argument against the practice sometimes adopted of employing Sunday labor. The practice of some workers of going to the factory in the morning without having taken food is commented upon in the third section under the title "Food and feeding." Some consideration is also given to the means by which maximum output may be obtained, while the influence of overtime upon the general health of the worker is treated in the concluding pages.

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[1] See MONTHLY REVIEW for June, 1916, p. 79, for a digest of this report.

[2] Great Britain. Home Office. Second interim report on an investigation of industrial fatigue by physiological methods. London, 1916. 76 pp. 18 charts.

Fatigue in this report is taken to mean "a diminished efficiency of the organism occurring after labor and partly dependent upon it."[1] Its degree appears to be determined partly by the duration and character of the labor performed and partly by the variety of circumstances outside the mill, among which the home conditions of the worker are important. Individual differences, partly constitutional and partly matters of habit, are also a factor. The results of tests made to determine the effect of overtime upon fatigue are set forth in a number of charts which show invariably a decided fall in the curve during a period of overtime, the only exception seeming to be on Monday when, although overtime was worked, little if any indication of fatigue is noted. This is probably due to the fact that a rest of 42 hours had been taken. These charts also indicate the advantage to be gained by avoiding a series of consecutive overtime days and the further fact that, although overtime workers were allowed additional rest intervals, at the end of the rest period they were considerably more fatigued than they would be at the end of a normal day. This the reports explains in the following statement:

> When once an individual has, through labor during ordinary hours, reached a certain degree of fatigue, and proceeds to further labor (overtime) without taking the repose necessary to dissipate the fatigue already produced, this further labor has a greater physiological effect and exhausts the organism more than would similar amount of labor performed when fatigue was absent. This is a well-known fact in physiology; it is also a matter of ordinary experience. It is of importance in the present connection because it indicates that *overtime labor is more harmful to the worker than labor performed during ordinary hours. It is therefore physiologically extravagant.*

The degree of fatigue developed during the night was found to be greater than that developed during the day. Furthermore, it is shown in the report that under ordinary conditions the labor of an overtime day may be sufficient to interfere with recovery from fatigue during the night following. The following excerpts from the report indicate the results of the study of fatigue due to overtime:

> Development of fatigue and recovery are concomitant processes. The rates of the accumulation and disappearance of fatigue are determined by the relative activity of production and recovery.
>
> During the day fatigue accumulates. During the night the accumulation is dissipated. The effect, however, of the recovery may not show itself on Monday, when coordination is disturbed owing to abstention from labor.

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[1] The report gives a more detailed definition in the following statement: "Physiologically fatigue may be regarded as the expression of a condition of the neuromuscular mechanism which tends to prevent further expenditure of energy when the supply runs low. The seat of fatigue is rather on the nervous than on the muscular side. It is not a direct expression of the exhaustion of the supply of muscular energy, though probably dependent in great measure upon it. The appearance of fatigue is due to the action of a protective mechanism, similar to the safety valve or electric fuse, but, unlike these, acting when energy becomes deficient. For the purposes of this paper it may be taken as an indication of a diminished supply of energy and a lessened capacity for work."

Since production is greatest and recovery is least toward the end of period, day and week, fatigue accumulation is then at its maximum.

A lengthening of period, day or week, leads to increased fatigue accumulation. The distribution of overtime days affects the result.

Under present conditions, production of fatigue becomes progressively more rapid from day to day; recovery becomes less rapid. Thus fatigue accumulates, and "balancing," which tends to diminish fatigue by diminishing application, is introduced. Production and recovery are restored to the normal, and accumulated fatigue is dissipated, by the week-end rest.

Overtime labor, when performed by a tired worker, results in an amount of fatigue out of proportion to the length and severity of the labor. Fatigue production is increased and recovery is lessened by overtime.

An increase in the amount of overtime worked in a given period will produce an increase of fatigue out of proportion to the increased time.

Overtime periods worked on consecutive days produce more fatigue than if separated by days of ordinary length.

Overtime produces different results in different individuals according to constitution, habits, and nutrition, and also according to varying "fitness." It may lead to serious waste of time.

The effect of overtime is not confined to the days on which it is worked.

Overtime labor is physiologically and economically extravagant. It frequently fails in achieving its object.

It is natural to presume that overtime and fatigue, the cumulative effect of the latter being increased by overtime, as already shown, will exert an appreciable influence upon output, and tests made upon "winders," surgical lint packers, and boracic lint packers, and summarized in the report under review, seem to indicate a low output during periods of overtime and a more uniform output throughout the day where no overtime is worked. To illustrate, three lint packers in one week's time working 12 hours a day (6 to 8; 8.30 to 12.30; 1.30 to 5.30; and overtime, 6 to 8) showed the following average number of pounds of lint rolled per hour on each day:

EFFECTS OF OVERTIME ON OUTPUT OF LINT PACKERS.

Day.	3 peririods (10 hours).	Overtime (2 hours).
Monday	76.5	64.0
Tuesday	76.8	72.3
Wednesday	76.5	64.0
Thursday	76.2	64.0
Friday	72.3	64.0
Saturday	[1] 82.2	[2] 76.6

[1] Two periods, 6 to 8 and 8.30 to 12.

[2] Overtime period, 1.30 to 4.

This indicates an average of 76.8 pounds of lint rolled per hour during the normal hours of work, while the average for the overtime was only 67.5 pounds. It is stated that the diminution of output due to overtime "is often so great that the total daily output is less when overtime is worked than when it is suspended," overtime thus defeating its own object.

A rather important fact disclosed by the experiments is that the early morning period seems to bear the same relation to the labor of the day as Monday does to the labor of the week. In both cases a cessation of work produces a disinclination to recommence, to overcome which a distinct effort on the part of the worker is demanded. Thus, among 8 winders the weekly average of bobbins wound before the early morning period, 6 to 8, was suspended was 261 per hour and the weekly average for the morning period, 8.30 to 12.30, was 275 per hour; while during a week in which the early morning period was suspended the average wound per hour in the morning period, 8.30 to 12.30, was 316. "In neither case can this be said to be due to fatigue, since a rest interval has just occurred. It is rather a loss of the special coordination which resulted from the prolonged performance of a particular set of actions and which enabled the worker to carry them out more perfectly. Only when the special coordination has been regained (temporarily) will the work be performed once more with ease and celerity."

Based on the statement that output varies according to (1) the condition of the worker with regard to skill, health, freedom from fatigue, proper food, and fitness, and (2) the circumstances of the worker with regard to machinery, material, associated workers, weather, etc., the following general conclusions are drawn from the study of the influence of fatigue and overtime on output:

> Where the factory day consists of four working periods output is low during two of these, viz, the early morning period and overtime.
>
> During the middle periods of the day output is normally high, but is lowered by the working of overtime. This diminutio is often so great that the total daily output is less when overtime is worked than when it is suspended. Thus overtime defeats its own object.
>
> The lowest output of the day is often found in the early morning period at the beginning of the week and in the period of overtime at the week's end. The change appears to be due to the accumulation of fatigue and to the wearing off of the Monday effect (described above).
>
> The Monday effect * * * is not without a definite influence on output. It should be recognized and controlled where maximum output is desired.
>
> In cases where the early morning hours are not worked the unsatisfactory output commonly found in this period appears to be transferred, or not to be transferred, to the succeeding period, according to the particular day of the week concerned. On Monday the suspension of the early morning hours will, as a rule, lower output in the succeeding period. On Tuesday also a lowering will be noticed. On the remaining days of the week the suspension of work during the early morning hours is followed by an improvement in the output of the morning period. The change is due to the greater influence of practice

(through restored coordination) early in the week and of rest (through lessened fatigue) later on.

A worker may occasionally show a very high output in the early morning period.

Psychical influences affect output. The output on Saturday, in spite of great fatigue, is often high owing to anticipation of the week-end rest.

Workers may be so greatly fatigued at the end of the week that an extra period of overtime is beyond their powers, and should this be insisted upon an unsatisfactory output may be expected. A similar condition may exist on Friday.

Great variations may occur in the output of individual workers at different times. The causes of such variations may be purely personal and temporary, or they may be general and affect groups of workers.

The unsatisfactory output of the early morning period is due partly to loss of coordination. It appears to depend also upon lack of rest, lack of food, and general discomfort. These things arise indirectly from excessive hours of labor.

The unsatisfactory output of the overtime period is due to fatigue.

The early morning period may be regarded as bearing a similar relation to the day as Monday bears to the week. In both cases abstinence from work has produced a disinclination for labor and an inability to carry it out effectively. This is due rather to loss of coordination than to fatigue. Examples of similar loss of coordination may be found in knitting, in typewriting, and in similar processes.

Where no overtime is worked output during the different periods of the day is more equal.

A worker employed for 10 hours per day may produce a greater output than when employed for 12 hours, the extra rest being more than sufficient to compensate for the loss of time.

A worker employed for 8 hours per day may produce a greater output than another of equal capacity working 12 hours per day.

A group of workers showed an absolute increase of over 5 per cent of output as a result of a diminution of 16⅔ per cent in the length of the working-day.

Another group increased their average rate of output from 262 to 276 as a result of shortening the day from 12 hours to 10, and to 316 on a further shortening of 2 hours.

A group of pieceworkers increased their earnings considerably as a result of a diminution in the length of the working-day.

The suspension of overtime affects especially the output of the morning period.

The suspension of the early morning period increases the rate of output, even after overtime has been suspended.

The time "lost" by factory workers may approach an average of 10 per cent of the working-day. The amount lost varies with the length of the working-day and appears to depend upon fatigue.

Under the conditions studied, neither rate of working nor total output attains a maximum when a 12-hour day is adopted.

Rate of working and total output are limited by fatigue rather than by other conditions.

Total daily output may be diminished by the introduction of overtime.

The insufficiency and unsuitability of food have, according to the report, an important bearing upon the efficiency of the worker. Cases are noted in which the output of individual workers was below the average because of inadequate dietary or omission to take food before beginning work. Experiments conducted over two periods of one week each showed that when the early morning period was not suspended three winders averaged 5,006 bobbins daily during the middle-day periods—that is, 8.30 to 12.30 and 1.30 to 5.30—whereas when the winders worked during the early morning period the middle-day periods showed an average of 5,630 bobbins per day, indicating the advantage of having time in the morning to take a meal before starting work. Workers should go home to meals, if possible, it is stated, but to accommodate those who can not do this a well-organized, well-managed canteen should be provided.

The introduction of overtime with its influence upon fatigue, declares the report, is a disturbing factor in the equilibrium of the factory operation since it tends to upset the balance between income and expenditure of energy. The resulting fatigue is disproportionately great, since the additional labor must be performed at the end of an ordinary day by an individual who is already tired. The extra energy thus required finds compensation in a diminution of application to work extending throughout the entire day. As showing that application varies greatly and that much time may be lost when it is imperfect, the report states that two workers lost an average of 26.5 per cent, 14.5 per cent and 18.5 per cent of the total time in the early morning, morning, and afternoon, respectively. "Where other things are equal, output may be taken as an indication of application." To prevent, or at least minimize, this condition, "balancing" is suggested, by which is meant "the adjustment of application to the length of the working day, and the maintenance of equilibrium between the development and the expenditure of energy."

The actual time worked and the actual rate of working, it is asserted, are essential factors in the attainment of maximum output. "They are intimately related and vary in sympathy, and the total output depends upon a proper adjustment of these two factors." It is shown by experiments that the losses in nominal time (the average time during which the workers attend) and in actual time (the average time actually worked), though always present, are by no means constant in amount, and that they vary largely chiefly because of the condition of the worker with regard to fatigue. These experiments also showed that rates of working vary in the case of different workers and also in the case of individual workers at different times of the day, and as a result of changed conditions.

Of special interest in connection with output is the fact that every alteration in the length of the working day has been followed by a corresponding alteration in the rate of actual working.

> * * * Under ordinary circumstances every increase in works time [the average hours of the mill] must be followed by an increase in nominal time and an increase in actual time, but successive increases in works time will lead to diminishing increases in nominal time and actual time, since small time losses will be multiplied. Ultimately a condition will be reached when increased works time no longer leads to increased actual time, but may even lead to a diminution. Moreover, every increase in actual time, and therefore (under ordinary conditions) every increase in works time and in nominal time, will lead to a diminution of actual rate, and this diminution will be especially marked as the result of the introduction of overtime. It is for this reason that the introduction of overtime frequently leads to a diminution of total output.

The influence of overtime upon the general health of the worker, apart from his condition with regard to fatigue at any particular moment, is regarded as important, since speed of working and the endurance necessary for prolonged labor must depend upon general health. As a result of tests conducted in this connection, the following conclusion is presented:

> The general health of the worker, upon which his rate of working and his powers of endurance depend, so far as it can be gauged by the tests used in this investigation, appears to be prejudiced by the introduction of overtime, and, to a less extent, by work in the early morning hours. The suspension of overtime was followed in every case by an improvement in the condition of the worker. In a large proportion of cases that condition was further improved by the suspension of work in the early morning hours. Where an estimate was made of the time lost by the worker, and this was taken as an indication of his general health, the suspension of overtime was found to result in a saving of time of 4½ per cent. The subsequent suspension of the early morning period was followed by a further diminution in the time lost.

The second interim report of the British Association for the Advancement of Science,[1] covering a study of fatigue from an economic standpoint, "with the definite practical aim of influencing industrial organization," contains a section on accumulated fatigue in warfare by Dr. Gwynne Maitland, who bases his observations on a clinical study rather than an experimental examination of soldiers in Serbia. He concludes that—

> The history of six years of Balkan wars proves beyond dispute that the strain of forced marching, inadequate food, insufficient rest and sleep, resulting in a temporary and functional fatigue to begin with, may ultimately, through a gradual depreciation of tissue, cause a genuine degenerative lesion.

In ascertaining the relation between fatigue and accidents the report notes the importance of determining how far the mental or bodily state of the injured man may contribute to the occurrence of an industrial accident, and refers to a list of causes of accidents presented to the departmental committee on accidents some years ago which showed only 75 out of 1,362 accidents to which fatigue was not "contributable." According to the degree to which the human element enters, accidents are classified as follows:

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[1] The question of fatigue from the economic standpoint. Second interim report of the committee. British Association for the Advancement of Science. Newcastle, 1916. 24 pp.

> First would come the accidents due to the action of the material which no human capacity could have forseen or avoided at the time; secondly, accidents which a high degree of attention might just have foreseen; thirdly, accidents which a quick reaction (i. e., presence of mind) might have escaped; fourthly, accidents which either great attention to the work in hand might just have foreseen and a quick reaction might just have escaped; next, accidents due to some positive inattention or lack of muscular control (usually a muscular inaccuracy) either with extenuating circumstances (fifthly) or not (sixthly); and, finally, accidents due either to a lack of muscular control (often a lack of muscular coordination) or to inattention plus a slow reaction that misses the chance of escape.

The applicability of psychology to problems of industrial fatigue is given brief attention, but after reciting some methods of laboratory experiments and noting the effect of fatigue in schools, it is concluded that—

> On the whole, in spite of their experiments in school and laboratory, the work of psychologists is still for the most part the reverse of illuminating for the problems of industry. The writers of general text books are content to introduce fatigue in the most cursory manner, and the student can obtain from them little idea of the problems which now demand attention.

OUTPUT IN RELATION TO HOURS OF WORK.

The health of munition workers committee was appointed by the British ministry of munitions, shortly after its organization, to study and advise as to the hours of labor and working conditions best adapted to promote the health and efficiency of the workers in munitions factories. Several memoranda have been issued by this committee. Two of these are concerned with the subject of hours of labor. The first (Memorandum No. 5)[1] made the general recommendation that weekly hours should not exceed 65 to 67 for men and 60 for women, but left open detailed proposals for particular operatives until the completion of more comprehensive investigations.

The second memorandum (No. 12)[2] presents the results of one of these investigations. It is concerned with the subject of output in relation to hours of labor. The object was to ascertain, for each of several important munitions operations, what system of working hours would produce the maximum output over a period of time.

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[1] Monthly Review of the United States Bureau of Labor Statistics, June, 1916, p. 77.

[2] Great Britain. Ministry of Munitions. Health of munition workers committee. Memorandum No. 12, appendix to Memorandum No. 5 (Hours of Work). Statistical information concerning output in relation to hours of work. (Collected by H. M. Vernon, M. D.) London, 1916. 11 pp.

The cost of production was not considered, nor was personal study made of the health of the worker. It was assumed that any evil effects of long hours upon health would be reflected in output, and that the schedule of hours that assured the maximum productivity over a considerable period of time would necessarily be one that conserved the health and strength of the workers concerned.

The investigation covered several operations of distinctly different character, some demanding heavy, manual labor, others of a light, more or less sedentary type. In each case comparison is made of the relative output of the same group of workers at different periods under different time schedules. It was found that the time schedule producing the maximum output varied with the operation.

In operations involving heavy, manual labor, a greater output was uniformly obtained when the weekly hours were 60 or less than when longer hours were worked. Thus, the employment of women at the work of turning fuse bodies, for which the data obtained were most complete, may be cited. There were 100 such workers under observation for a period of 24 weeks. During the first 6 weeks of this period the average actual hours of labor were 68.2 per week. Taking the average hourly output of fuse bodies during these 6 weeks as 100, the total weekly output amounted to 6,820. During the latter part of the period the weekly hours were reduced to 59.7. The relative hourly output thereupon increased from 100 to 123, and this was sufficient to cause an increase in the total weekly output from 6,820 to 7,343.

The same tendency was found among men engaged in the very heavy work of sizing fuse bodies. Information was obtained regarding working hours and output of a group of 27 such workers over a period of 27 weeks. During the first 6 weeks the average weekly hours were 61.5, which, taking the relative hourly output at 100, made a total weekly output of 6,150. Later, with a reduction in working hours to 55.4 per week, the hourly output increased to 122 and the total weekly output to 6,759. Inasmuch as a slightly longer working week—56.2 hours—resulted in a still larger total output—6,969—the reports conclude that the week of maximum productivity is one of approximately 56 hours.

On the other hand, in the case of work involving no heavy labor, the investigation indicates that, while a reduction in the hours of labor almost invariably increases hourly output, it may not increase, and in some cases may decrease markedly, the total output. Thus, in the case of a group of men and youths engaged in the light labor of boring top caps, a reduction of working hours from over 70 a week to under 60 increased hourly production by only 8 per cent, with the result that the total weekly output was very greatly reduced.

As regards the whole output, it is to be emphasized that the method of comparison employed necessarily required the limiting of the operatives under observation to those that remained at work for a very considerable period of time. This automatically excluded all those who might have dropped out because unable to keep up the pace. "That is to say, the data quoted relates to the fittest who were strong enough to survive in the struggle, and not to the general mass of workers in all classes who tried their hand at munition work."

The report is given below in full:

1. In a previous memorandum (No. 5) the committee recommended that the average weekly hours of labor, including overtime, should not exceed 65 to 67 for men, and 60 hours for women. They suggested that it might be desirable to differentiate to some extent between different kinds of work, but they did not offer any detailed information, because at the time they had not sufficient data at their disposal to warrant definite conclusions. In order to remedy this deficiency, special investigators, including myself, have been engaged for many months past in collecting statistics concerning output in relation to hours of labor at a number of munition works, and I am now bringing forward a portion of the data which I have obtained as they appear to me, not only to afford information concerning the most suitable hours of labor in certain specific munition operations, but also to suggest some of the principles which should be followed in fixing the hours of labor for munition work in general.

2. I understand that the object of the committee is in many ways similar to that of the managers of munition works, and is to ascertain the hours of employment most likely to produce a maximum output over periods of months, or maybe even of years. They hold that output can not be maintained at the highest level for any considerable period if the conditions are such as to lead to excessive fatigue and to deterioration in the health of the workers. If health and physical efficiency are maintained they would raise no *a priori* objections to any given number of hours, however long. Further, in considering the relative value of, say, a 65-hour week as compared with a 55-hour week the question is whether the former or the latter will produce the greater total weekly output, rather than whether any extra cost involved by the additional output is justified by the economic or military conditions existing at any given time.

3. The statistical data collected with one exception concern the output of day shifts, and they were collected in large and recently built munition works, where the conditions of labor, such as lighting, warming, ventilation, and the provision of canteens, were as favorable as possible. All classes of operatives were on piecework, they were paid at a high rate of wages, and there were no trades-union restrictions whatever upon output. Hence there was every possible stimulus for them to exert their maximum powers of production. It is more convenient to describe first the data obtained relating to the output of women, as one group of them is specially complete.

WOMEN ENGAGED IN MODERATELY HEAVY LABOR.

4. The complete series of output data just referred to concerns women engaged in turning aluminum fuse bodies. The operatives were standing all day at capstan lathes and had to subject each fuse body to seven successive boring and cutting operations. These operations required close attention throughout and some delicacy of manipulation, so that no relaxation of effort was permissible

during the actual turning. Nearly 200 operatives were engaged on the work, but for the purposes of statistical analysis the output of only 100 of them could be considered. None were included unless they had attained their maximum output (which statistical examination of individual output showed was attained after 3 weeks' experience) and were engaged on the operation for 15 or more weeks out of the 24 weeks of the statistical period dealt with. For many months previous to this period the hours of labor had usually been 77¼ per week, except that in the second week of each month there was no Sunday labor, or the hours were reduced to 69¾ per week. From Table I we see that in the 6-week period just before Christmas the actual hours of work averaged 68.2 per week, or 6.6 hours less than the nominal hours (74.8 hours). Taking the average hourly output of fuse bodies as 100, the total (relative) output per week comes to 6,820. The next fortnight was much broken by the Christmas holiday. This amounted practically to a week if the days taken without permission be added to those officially sanctioned. It will be noted that in the week and a half before this holiday the output rose distinctly above the previous average (viz, 6 per cent), but in the half week immediately following it fell considerably below the average (viz, 11 per cent). Both of these variations form a typical feature of output data in relation to holidays, while another typical feature is the considerable and persistent rise which follows on a holiday. In the present instance this rise amounted to 11 per cent more than the average for the pre-Christmas period, or the total output reached its absolute maximum of 7,615 per week. The beneficial effects of the holiday upon output undoubtedly lasted four weeks and probably more, but the reduction in the hours of labor from January 24 onward precluded the possibility of tracing it further. After a 4 days' holiday at the beginning of August the output of a smaller group of the operatives, 40 in number, remained high for 5 weeks and was 7 per cent greater than the average output during the next 8 weeks.

TABLE I.—ONE HUNDRED WOMEN TURNING FUSE BODIES.

Week ending.	Actual hours of work per week.		Nominal hours of work per week.	Hours of broken time per week.		Relative output per working hour.		Hours of work multiplied by relative output.	Remarks concerning output.
Nov.14	62.0	68.2	67.5	5.5	6.6	98	100	6,820	Hourly output fairly steady.
Nov.21	68.8		75.5	6.7		99			
Nov.28	66.7		75.0	8.3		102			
Dec. 5	70.9		77.2	6.3		96			
Dec. 12	69.1		76.2	7.1		99			
Dec. 19	71.8		77.3	5.5		107		....	Typical rise in hourly output before holiday.
Dec. 26	41.8		46.0	4.2		105		....	
Jan. 2	32.8		....	....		89		....	Great fall in hourly output immediately after holiday.
Jan. 9	65.2	68.6	69.3	4.1	5.7	113	111	7,615	Subsequent considerable increase of hourly output, whilst total output rises to a maximum, 12 per cent greater than that of pre-Christmas period.
Jan. 16	70.3		77.2	6.9		107			
Jan. 23	70.3		76.3	6.0		112			
Jan. 30	62.4	61.6	68.5	6.1	5.9	111	107	6,591	Reduction of hours of labor from 74.3 to 67.5 has no immediate effect on hourly output, hence a considerable reduction of total output.
Feb. 6	60.8		66.5	5.7		102			
Feb. 13	49.2	48.4	52.0	2.8	3.6	108	....	....	Temporary shortage of material and reduction in hours of labor.
Feb. 20	47.6		52.0	4.4		106			
Feb. 27	61.4	59.7	66.5	5.1	4.6	118	123	7,343	Effect of shorter hours of labor now established and hourly output reaches a maximum. Total output 8 per cent greater than in pre-Christmas period.
Mar. 5	62.2		66.5	4.3		125			
Mar. 12	54.8		58.5	3.7		127			
Mar. 19	62.1		66.5	4.4		121			
Mar. 26	60.4		66.5	6.1		121			
Apr. 2	58.6		64.8	6.2		121			
Apr. 9	54.9		58.5	3.6		121			
Apr. 16	62.9		66.5	3.6		126		....	Typical rise in hourly output before holiday (Easter).
Apr. 23	47.0		49.5	2.5		125		....	

5. The output data of Table I indicate that the beneficial effect on output of a reduction in the weekly hours of labor from 74.8 to 67.5 was not immediately manifest. Even a reduction to 52 hours seems to have no influence, but this was owing to a temporary shortage of material. From February 27 onward the hours of labor were 66½ per week (or 58½ in the second week of each month, when there was no Sunday labor), and we see that during a period of eight weeks the hourly output now averaged 23 per cent more than in the pre-Christmas period. The total output is 7,343 per week, or 8 per cent more than in the pre-Christmas period, in spite of the hours of labor being nominally 10.5 less, and actually 8.5 less. It is probable that the 60 hours worked per week were still too many to give the best total output, but at least they justify the statement that in order to attain a maximum output women engaged in moderately heavy manual labor should not work for more than 60 hours per week. Observations adduced below suggest that an equally good total output could be maintained if the actual working hours were reduced to 56 or less per week.

6. It might be thought that the great improvement in hourly output under the shorter hours régime was due, partly or wholly, to increased skill of the operatives or improvements in the machinery. Neither of these hypotheses can be substantiated. On classifying the operatives into two groups, according as they had been engaged in turning fuse bodies for about five months previous to the statistical period dealt with, or for about one and a half months on an average, the hourly output of the former group was found to be 1 per cent less than that of the latter group during the pre-Christmas period, and 1 per cent more than it was during the spring period, or in other words, it was the same within the limits of chance error. As regards the other alternative, no change had been made in the tools, the machinery, the nature of the operation, or the quality of the alloy used during the statistical period dealt with, or for 4½ months previous to it.

7. Further proof of the advantage of shorter hours was afforded by the output data of some of the operatives on an earlier occasion. One group of them, 17 in number, worked only 51.8 to 62.6 hours per week for five weeks in June and July, and during the last three weeks of this period their hourly output was 18 per cent greater than that of another group of 14 operatives who were working the usual long hours. Subsequently, when both groups worked the same long hours, their output was identical.

BROKEN TIME AND SICKNESS.

8. It will be seen from Table I that the operatives lost on an average 6.6 hours per week of "broken" time before Christmas and 4.6 hours per week in the final 8-week period, or that they lost practically half a day per week in this way. But even this does not represent by any means the total time lost, for I have put in a separate category such time as was presumably lost by indisposition. I have made the arbitrary assumption that operatives who put in less than 45 hours per week of actual work out of a nominal 58½ or more did so because of sickness rather than slackness, and I have excluded them in calculating the broken time data quoted in the table, though I retained them when calculating the output of fuse bodies per working hour. In the 6-week pre-Christmas period 4.1 per cent of the weeks worked by the operatives were "short" weeks of less than 45 hours, the average time of actual work amounting to 30.2 hours per week. In addition, the operatives were absent altogether for 2.1 per cent of the weeks. Sickness increased considerably after

Christmas, for in the 5-week period, January 3–February 6, 5.7 per cent of the weeks were short weeks, and 3.6 per cent of them were absent weeks, whilst in the 7-week period, February 21–April 9, no less than 12.4 per cent of the weeks were short weeks (averaging 28.6 hours), and 5.4 per cent of them were absent weeks, in spite of the fact that the nominal hours of labor were 10.8 less than in the pre-Christmas period.

9. There can be no doubt that the frequent occurrence of these short and absent weeks was due very largely to fatigue resulting from the strain of the heavy lathe work, for women engaged in light sedentary occupations showed only about a third as many lapses. I was able to obtain data concerning the timekeeping of no less than 400 women and girls engaged in the sedentary occupations of viewing, gauging, and assembling the component parts of fuses, and in Table II are given the average numbers of short and absent weeks observed in the 6 weeks before Christmas, when the nominal hours of labor were 76 per week; in the 5 weeks after Christmas, when they were 75 per week; and in the subsequent 7 weeks (Feb. 7–Mar. 26), when they were 64 per week. Taking first the women of 21 and over, for they alone are strictly comparable in age with the fuse-turning women, it can be seen that in each of the statistical periods dealt with these women put in only about a third as many short weeks as the fuse turners, while they were absent three times less frequently in two of the statistical periods and about half as frequently in the third period.

TABLE II.—WEEKS IN WHICH OPERATIVES WORKED LESS THAN 45 HOURS OR WERE ABSENT.

Age of operatives.	Number of operatives.	Short weeks.			Absent weeks.		
		6 weeks before Christmas.	5 weeks after Christmas.	7 weeks following (Feb. 7–Mar. 26, or Feb. 21–Apr. 9).	6 weeks before Christmas.	5 weeks after Christmas.	7 weeks following.
		Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
14–16	71	1.3	1.7	3.6	2.9	1.7	1.4
17–18	58 (fuse)	.3	3.1	5.0	.7	3.8	2.4
19–20	96 (gaugers)	2.4	2.8	6.4	2.0	1.7	3.3
21 and over.	175	1.4	2.1	3.4	.7	2.1	1.8
21 and over.	100 (fuse turners)	4.1	5.7	12.4	2.1	3.6	5.4

10. As regards the girls engaged in sedentary work, the table shows that those of 19 to 20 years put in the most short and absent weeks, while those of 14 to 16 put in the least, and in this respect corresponded closely with the women of 21 and over. In Table III are recorded the average hours of broken time observed in the three statistical periods mentioned, and it will be seen that here again the girls of 14 to 16 resembled the women of 21 and over in keeping the best time, while the young women of 19 to 20 were on the whole the worst timekeepers. If comparison be made with the data relating to the fuse-turning women, it will be seen that on an average the adult women engaged in this sedentary work lost only about half as much time as they did.

11. It should be mentioned that these gauging women were not on piece rates like all the others, but were on day rates with the addition of a large bonus on output if above a certain minimum. Doubtless this system of remuneration tended to improve their time keeping to some extent, though probably not much. Thus the group of women recorded in the next section, who were engaged on

the light labor of milling a screw thread, were paid at piece rates, and yet kept time very much better than the fuse-turning women, and not much worse than the gauging women.

TABLE III.—BROKEN TIME OF WOMEN GAUGING FUSES.

Age of operatives.	Number of operatives.	Average hours of broken time per week during—		
		6 weeks before Christmas.	5 weeks after Christmas.	7 weeks following.
14-16	71	2.9	3.9	3.2
17-18	58	3.9	5.2	3.0
19-20	96	3.5	5.9	4.0
21 and over	175	2.5	4.7	3.0

12. It is evident that in fixing the number of hours required to produce a maximum output close attention must be paid to the effect of any given number of hours on timekeeping. If an increase in the hours of labor from 50 to 60 per week caused the total output of the operatives, taken as a group, to increase permanently by, e. g., 10 per cent, it would be worth while to adopt these hours, but if after a few weeks of the longer hours it were found that 5 per cent more of the operatives were absent from sickness, and 10 per cent more of them were putting in short weeks of an average of 30 hours instead of the nominal 60 hours, there would be no gain whatever in the total output. Now it will be seen from Table II that in the third of the statistical periods dealt with 9 per cent more of the fuse-turning women were putting in short weeks than of the gauging women, while 3.6 per cent more of them were absent. If, therefore, it were found that by cutting down the hours of actual work of the fuse-turning women from 60 to 56 they were able to reduce their short and absent weeks to those shown by the gauging women, the output would remain practically unchanged. For other and independent reasons, to be mentioned later on, it seems probable that a reduction of the working hours to 56 per week would have no adverse effect on output, and hence there can be little doubt that this number of hours is the absolute maximum for the type of work under consideration, and that if anything it errs on the side of excess.

13. Another point to be borne in mind in fixing hours of labor is the time taken by the operatives to get from their homes to the works, and vice versa. Personal observation leads me to think that the operatives referred to in this memorandum took on an average somewhat less than an hour each way, though I have no exact statistical data on the subject. There was an efficient tram service at their disposal.

WOMEN ENGAGED IN LIGHT LABOR.

14. In the next type of munition work to be described, the operatives were milling a screw thread on the fuse bodies. This necessitated their standing at semiautomatic machines, where they removed one fuse body and inserted another every minute or so. The requisite muscular effort was moderate and simple in character, and took up only about a fifth of the total time required for the operation. For the remaining four-fifths of the time the operative had nothing whatever to do, and so the call upon her attention and her muscles was very much less than that experienced by the operatives previously described.

The output of 21 women was investigated over a similar statistical period, but it seems unnecessary to quote the results in full. The average records adduced in Table IV show that the hourly output varied in the same direction as that of the fuse-turning operatives, but to a very much more limited extent. In the 3 weeks after Christmas it was only 6 per cent greater than in the 5 weeks before it, and since the average hours of work were somewhat shorter, the total output remained practically unchanged. A considerable reduction of working hours did not lead at first to any improvement of hourly output, but this established itself after 4 weeks, and was maintained at a steady level during the next 8 weeks. In that the average excess of hourly output amounted only to 9 per cent above that of the pre-Christmas period, the total output became reduced to 4 per cent below it. However, in the 3 weeks after Easter the hourly output improved a further 3 per cent so that the total output reached to within 0.6 per cent of the pre-Christmas value. Probably the best number of hours is something between the limiting values investigated, or about 62 hours, for if the output of 109 per hour were maintained over this time, the total ouput would work out at 6,758, or slightly above that of the pre-Christmas period.

TABLE IV.—TWENTY-ONE WOMEN MILLING A SCREW THREAD.

Statistical period.	Average hours of actual work.	Average hours of broken time.	Average (relative) hourly output.	Hours multipled by output.
5 weeks preceding Christmas (Nov. 15–Dec. 19)	67.4	4.4	100	6,740
2 weeks at Christmas (Dec. 20,–Jan. 2)	44.7	3.5	98	....
3 weeks after Christmas (Jan. 3–Jan. 23)	63.7	3.0	106	6,752
4 weeks later (Jan. 24–Feb. 20)	53.1	2.6	104	5,522
8 weeks later (Feb. 21–Apr. 16)	59.3	3.6	109	6,463
2 weeks at Easter (Apr. 17–Apr. 30)	39.4	2.7	108	....
3 weeks after Easter (May 1–May 21)	59.8	2.6	112	6,698

MEN ENGAGED IN HEAVY LABOR.

15. The labor assigned to male munition workers is, as a rule, considerably heavier than that assigned to women; but making due allowance for the greater strength and endurance of the man, we find that his output is similarly affected by a reduction in the hours of labor. One of the most fatiguing types of munition work so far investigated by me is that of "sizing." In the sizing of fuse bodies the article is usually subjected to four separate operations, in each of which it is clamped to a small flywheel and handle and is screwed through a steel tap so as to cut a screw thread on it. The operations require no manual dexterity, but they are a great and continuous strain on the muscles of one arm and shoulder and to a less extent on those of the back. The operatives seldom use both arms, as they prefer to keep the "screwing" hand dry and use the other for picking up the oil-covered fuse bodies. The output of a group of 27 operatives was investigated and the mean results are given in Table V. The hours of labor were always shorter than those worked by the women. They never exceeded 71 hours in any one week and seldom included Sunday labor. The hourly output showed a marked drop during the Christmas fortnight and a considerable rise (to 118) for the first week after this fortnight, but the average output during the six weeks after Christmas was only 9 per cent greater than that of the pre-Christmas period in spite of the fact that the weekly hours of labor were 10.4 shorter. Evidently the operatives took a long time to adapt their rate of production to the shorter hours, for the hourly output subsequently averaged 22 per cent in excess of that of the pre-Christmas

period. This caused the total output to be no less than 10 per cent greater, and it is probable that even this figure does not represent the full effect of reducing the hours of labor, for after Easter the hourly output improved a further 2 per cent and the total output was increased to 13 per cent above that of the pre-Christmas period. However, a part of this improvement may have been only the temporary effect of the holiday. The week February 14–20 is omitted, as the operatives worked only 41 hours, owing to shortage of material.

TABLE V.—TWENTY-SEVEN MEN SIZING FUSE BODIES.

Statistical period.	Average hours of actual work.	Average (relative) hourly output.	Hours multiplied by output.
6 weeks preceding Christmas (Nov. 8–Dec. 19)	61.5	100	6,150
2 weeks at Christmas (Dec. 20–Jan. 2)	38.3	89	....
6 weeks after Christmas (Jan. 3–Feb. 13)	51.1	109	5,570
8 weeks later (Feb. 21–Apr. 16)	55.4	122	6,759
2 weeks at Easter (Apr. 17–Apr. 30)	41.0	112	....
3 weeks later (May 1–May 21)	56.2	124	6,969

16. The broken time is not quoted in the above table, as the nominal hours of labor were rather uncertain. Moreover, the operatives appeared to have had some freedom in selecting their own hours of work. The plan adopted in calculating the weekly hours of actual work was different from that observed in the other data quoted in this memorandum, for all weeks were included in which 20 hours or more were worked. The reason of this change was that these sizers, though they were absent altogether for only 1.8 per cent of the weeks included in the statistical period dealt with, were in the habit of putting in short weeks of 40 hours or less with some frequency. If only those operatives who put in 45 hours or more had been included, the average weekly hours of actual work would have come to about two hours more than the figures quoted in the table.

17. The operatives engaged in sizing fuse bodies were all full-grown men, but certain other sizing operations were performed by youths. The output of one of these groups may be quoted, but in that it concerns only nine operatives, the data are not so reliable as those just recorded. The youths 14 to 17 years of age were sizing steel base plugs, and from Table VI we see that their hourly output was 16 per cent greater in the 4 weeks after Christmas than it had been before, in spite of a slight increase in the hours of labor, whilst it was no less than 42 per cent greater in the 11 subsequent weeks when the hours of labor were reduced from 70.3 to 57. In consequence, the total output attained a value 19 per cent in excess of that of the pre-Christmas period. Even this value does not represent the full effect of the reduced hours of labor, for in the 3 weeks after Easter the hourly output was 55 per cent above that of the pre-Christmas period and the total output 38 per cent above it. Such results are so astonishing that one is naturally inclined to doubt their validity, but there appears to be no reason for denying their substantial accuracy. The boys must have been seriously overworked by the long hours, and hence the 8 to 12 hour reduction of the working week accelerated their rate of production much more than did the 6-hour reduction accelerate that of the men "sizers."

TABLE VI.—NINE YOUTHS SIZING BASE PLUGS.

Statistical period.	Average hours of actual work.	Average (relative) hourly output.	Hours multiplied by output.
5 weeks preceding Christmas (Nov. 15-Dec. 19)	68.3	100	6,830
2 weeks at Christmas (Dec. 20-Jan. 2)	46.3	106	....
4 weeks after Christmas (Jan. 3-Jan. 30)	70.3	116	8,155
11 weeks later (Jan. 31-Apr. 16)	57.0	142	8,094
2 weeks at Easter (Apr. 17-Apr. 30)	42.1	135	....
3 weeks later (May 1-May 21)	60.9	155	9,440

MEN ENGAGED IN MODERATELY HEAVY LABOR.

18. Typical examples of moderately heavy labor are found in shell making, and all the data described in this section relate to the output of 3-inch shrapnel shells. One of the most important and lengthy of the operations is that known as boring the powder chamber. This operation is performed on capstan lathes provided with three sets of boring tools, and it requires considerably more muscular energy than that involved in turning fuse bodies, though not so much as in sizing. At one shell factory, where the male operatives were being largely replaced by women, I was informed that though the women attained a good output in most operations, they produced only about half as many shells as the men did in this particular operation, since they had not the necessary strength.

19. The data in Table VII concern the output of 23 operatives, all of whom had been 4 months or more at the process previous to the statistical period recorded. During these months they worked at first for 53 hours per week, and subsequently for 49½ hours, and had attained their maximum output for these particular hours of labor. When their hours were suddenly increased to 64 per week (7 hours on Sunday), we see that they maintained their hourly output for three weeks with very little diminution. After this time there was a shortage of material at irregular intervals, so the output data were rendered valueless for statistical purposes, but even if the hourly output had fallen considerably lower, the total output would still have remained higher during a 60-hour week than during a 48-hour week.

TABLE VII.—TWENTY-THREE MEN BORING THE POWDER CHAMBER.

Week ending—	Weekly hours of actual work.	Hours of broken time.	(Relative) hourly output.	Hours multiplied by output.
Nov. 7	48.5 } 47.8	1.0 } 1.7	100 } 100	4,780
Nov. 14	47.1	2.4	100	
Nov. 21	59.5 } 59.7	4.5 } 3.1	107 } 100	5,970
Nov. 28	60.5	3.5	98	
Dec. 5	59.1	1.4	94	

20. An important operation is to "finish, turn, and form" the shell, which consists in taking off a fine turning, and afterwards filing down the shell. This operation probably needs the expenditure of about as much muscular energy as that of turning fuse bodies. The data in Table VIII show the output of 22 men who had been engaged at this work for 10 weeks, on an average, previously to the statistical period dealt with.

TABLE VIII.—TWENTY-TWO MEN, FINISHING, TURNING, AND FORMING 3-INCH SHELLS.

Week ending—	Weekly hours of actual work.		Nominal hours of work.	Hours of broken time.		(Relative) hourly output.		Hours multiplied by output.
Aug. 29	62.0	60.3	64	2.0	1.0	98	100	6,030
Sept. 5	64.1		65	.9		100		
Sept. 12	51.6		52	.4		101		
Sept 19	63.4		64	.6		101		
Sept. 26	52.3		53	.7		105		....
Oct. 3	39.0		39	.0		112		....
Oct. 10	51.2	51.8	52	.8	0.8	112	114	5,905
Oct. 17	53.0		53	.0		118		
Oct. 24	51.2		53	1.8		112		

21. The hours of labor in the immediately preceding week had been 64, but before that they had been 49 for 3 weeks, preceded by 64 or more for 7 weeks. We see that, on an average, the hourly output during the last 3 weeks recorded in the table, when the hours of labor averaged 51.8 hours, was 14 per cent greater than in the first 4 weeks when they averaged 60.3 hours. It is probable that a portion of this improvement was due to increased skill of the operatives, who were found to require 3 or 4 months' experience before attaining their maximum output, but assuming that the whole of the improvement was the direct result of the reduced hours of labor, the total output is still less for the short-hour weeks than for the long ones. The timekeeping was extremely good and suggests that the operatives could easily stand the 60-hour week, for not only was the broken time 1 hour per week or less, but during the 60-hour period recorded the operatives were never absent for a whole week, and they put in only 4 per cent of short weeks. It should be mentioned that in calculating broken time the 45-hour limit referred to previously was retained for operatives working 58½ hours or more per week, but with operatives working a nominal 52 hours only those were excluded who put in less than 40 hours of actual work, and with operatives working a nominal 49½ hours only those who put in less than 38 hours of actual work.

MEN AND YOUTHS ENGAGED IN LIGHT LABOR.

22. In the operation known as "rough turning," the rough shell is turned approximately to size. During four-fifths of the time required the operative merely watches the lathe, so the labor is very much lighter in type than that previously described and resembles that required for milling a screw thread on fuse bodies. The hourly output of 18 men was investigated and was found to be constant within the limits of chance error, whether they were working 49, 53, or 64 hours per week. For instance, on changing from a 49½-hour to a 64-hour week, the hourly output during three consecutive weeks was 100, 102, and 101 on that of the preceding weeks taken as 100. Again, when the 20 operatives of a permanent night shift had their hours increased from 47½ to 53½ for one week, and then to 67 hours for two weeks, their output was 99, 97, and 96 in the 3 weeks respectively, that of the preceding weeks being taken as 100. There can be little doubt, therefore, that these operatives could have worked longer weekly hours than 64 or 67 without greatly diminishing their hourly output, and so have attained a greater total output. This conclusion is strongly supported by the data for youths which are now to be recorded.

23. The youths, 15 to 18 years of age, were engaged in boring out the top caps of fuses by means of semiautomatic machines. About four times a minute they unclamped one cap and clamped in another, these two clampings together

occupying less than two seconds. For the rest of the time they stood at their machines doing nothing. From the average data recorded in Table IX, which concern the output of 17 operatives, it will be seen that before Christmas they averaged 75.6 hours per week of actual work out of the 78½ nominal hours. In the 6 weeks after Christmas their hourly output went up 6 per cent, but in that they averaged 4.7 hours a week less than before, their total output was slightly diminished. The output of the week February 14–20 is omitted, as there was a shortage of material, but in the next 8 weeks, when the average hours were reduced to 59.4 per week, the output rose another 2 per cent. This rise by no means compensated for the considerable reduction in working hours, so we find that the total weekly output was actually 15 per cent less than in the pre-Christmas period.

TABLE IX.—SEVENTEEN YOUTHS BORING TOP CAPS.

Statistical period.	Average hours of actual work.	Average hours of broken time.	Average (relative) hourly output.	Hours multiplied by output.
5 weeks preceding Christmas (Nov. 15–Dec. 19)	75.6	2.9	100	7,560
2 weeks at Christmas	50.0	2.7	106	....
6 weeks after Christmas (Jan. 3–Feb. 13)	70.9	4.6	106	7,515
8 weeks later (Feb. 21–Apr. 16)	59.4	4.4	108	6,415
2 weeks at Easter (Apr. 17–30)	40.8	4.6	95	....

24. It seems probable, therefore, that to attain maximum output 70 hours or more per week of this light labor must be worked. It will be seen from the table that when the operatives were working over 70 hours per week their broken time was not excessive. Moreover, they put in only 2 per cent of short weeks and 3.6 per cent of absent weeks on an average, so the long hours did not appear to affect their health.

COMPARISON OF RESULTS.

25. The various types of labor investigated may conveniently be divided into five, viz, very heavy, heavy, moderately heavy, light, and very light. Of these types the "very heavy," such as sizing fuse bodies, and the "heavy," such as boring the powder chamber, are not well suited to women. On the other hand, the "light" type, such as boring top caps and rough-turning 3-inch shells, had better be confined to women, as it is waste of muscle to appropriate them to men, or even to youths. Very light types of labor such as sedentary gauging operations should evidently be confined to women and girls.

26. We have seen that for men engaged in the very heavy labor of sizing fuse bodies the maximum hours of actual work appeared to be 56 or less per week; for men engaged in boring the powder chamber and in turning and finishing shells they were probably 60 or rather more, whilst for men rough-turning shells and for youths boring top caps they were probably 70 or even more. On the other hand, for women engaged in the moderately heavy labor of turning fuse bodies the maximum hours were 56 or less, whilst for women on the light labor of milling a screw thread they were rather over 60 hours. In so far as time keeping is a criterion, women and girls on the very light work of gauging fuses appeared to stand even 76 hours fairly well, but it is more than likely that their actual output was little, if any, greater than when they were working 64 hours, and so it is probable that this figure should be regarded as their maximum.

27. It must be realized that all of these data are provisional, but they clearly justify the conclusion that the hours of labor should be varied between wide limits according to the character of the work performed. This obvious fact is not realized by many managers of munition works, and the tendency is usually toward uniformity of hours for all types of labor and for workers of both sexes. The data adduced suggest that not only are women unsuited to the heavier types of work, but that even when engaged on the moderate and light types they are unable to stand such long hours as the men. Several sets of operatives, both male and female, were kept under close observation for many days in order that their powers of application might be investigated. Men engaged in boring the powder chamber and in turning and finishing shells were found, almost without exception, to stick to their work with admirable persistence, and it was very seldom that they rested even for a minute. On the other hand, women engaged in turning fuze bodies rested for times which in aggregate amounted to 1½ hours out of the 12-hour day, and over an hour out of the 10-hour day, in addition to the hour or so of compulsory rest required for attention to their lathes at the hands of the tool-setters. About half an hour of the voluntary rest pauses occurred on starting and stopping work, but much of the remaining hour or half hour was probably due, not to idleness on the part of the women, but to fatigue, and to an instinctive knowledge that short rest pauses helped to prevent undue fatigue. Still, it would have been better if these pauses and the times lost in starting and stopping had been curtailed by, e. g., half an hour a day, and the women had been permitted a corresponding reduction in their weekly hours of labor.

28. It is to be borne in mind that all of the times mentioned are the maximum hours of actual work, supposing that a maximum output is required regardless of cost of production. They necessarily impose a great strain on the operatives, and there can be no doubt that in many instances the strain was too great to be borne, and that the operatives had to drop out altogether. That is to say, the data quoted relate to the fittest who were strong enough to survive in the struggle, and not to the general mass of workers of all classes who tried their hand at munition work. It is almost impossible to discover the extent of this weeding out, but it is inevitably considerable. Hence the best hours of work, suited for peace times, are in every case considerably shorter than those mentioned, though the principle of graduating the number of hours of labor to the type of work performed still holds with undiminished force.

FURTHER POINTS FOR CONSIDERATION.

29. Though stern necessity may compel long hours of labor on the part of many munition workers, it is evident that, provided maximum output is maintained, the shorter the times for which they are shut up in the factories the better their chances of health and happiness. Hence everything possible should be done to speed up the rate of production so far as this can be done without making an extra call upon the physical energies of the operatives. Though I have no intention on the present occasion of discussing the matter in detail, I wish to suggest two simple plans of appreciably increasing the rate of production. The first depends on greater promptness in starting work. A few concrete instances will bring home the importance of this point, at least in some munition factories. In most works the motive power is electric, and in some the power supplied to each section is registered by a separate wattmeter. The machinery is started running shortly before work begins, and as the operatives get going, one after another, the power consumption steadily rises to a

maximum, which is attained when all the operatives have started. By means of these power records the rate of starting and stopping work can readily be ascertained in many instances, though not in factories where time is spent in a preliminary collection of necessary tools and material, and in their adjustment. The accompanying figure [figure not reproduced] records the increments of electric power over that required to drive the free-running machinery, on starting and stopping the afternoon spell of work. The continuous line represents the power supplied to a large shell shop which turned out 30,000 3-inch schrapnel shells per week. We see that the power supplied started mounting up 2 minutes after starting time, and reached half its full value in 4 minutes. The dotted-line curve, representing the power supplied to a section of 200 women turning fuse bodies, did not begin to rise till 5 minutes after starting time, and did not attain half its maximum value until 11 minutes after starting time. In other words, the operatives wasted about 7 minutes more in starting than did the operatives in the shell shop, most of whom were men. On the other hand, the fuse-turners finished more strongly than the shell-shop operatives, as can be seen by comparing the two curves given on the right side of the figure, and it was found that both sets of operatives lost, on an average, about the same aggregate of time in starting and finishing during the course of the whole day, viz, 34 minutes. The shell-shop operatives did not start much more promptly than the fuse-turners in the morning, partly because there was more delay in the arrival of their material, but in spite of this, if the operatives of both shops had started equally promptly, and finished equally strongly, 9 minutes out of the 34 would have been saved. There was no inherent reason why work should have been started promptly in one shop and not in the other. It was merely a custom of the particular shop, and even then the custom was not a fixed one. A series of meter readings of the women's section were taken for several days before and after the Easter holiday, and 9 days before the holiday the average amount of time wasted in starting after dinner was found to be 11 minutes; 2 days before it was 14 minutes. Two days after the holiday it was 16 minutes; 3 days after it was 15 minutes; and five days after it was 12 minutes. That is to say, it increased with the slackness of the operatives caused by the immediate approach of the holiday, and still more with their post-holiday lassitüde.

30. There can be no necessity for the waste even of 25 minutes in starting and finishing work. Ten or 15 minutes should be ample allowance, and the 20 minutes thereby saved could be deducted from working hours without any reduction of output. At one large works the manager informed me that he made a point of going into the various shops at starting time and seeing that the operatives began work promptly. In this way a considerable amount of time was saved.

31. The other method of speeding up production on which I wish to lay stress has already been referred to in an earlier memorandum (No. 7). It consists in the regulation of rest pauses. The custom in many munition works is for the operatives to work for a spell of five hours, and then, after an hour's interval, for another spell of 4½ to 5 hours. Such spells are undoubtedly too long in many types of munition work, but if a second break is introduced in the working day much extra time is lost in starting and stopping work. If the operatives are left to themselves they take rests at irregular and often unsuitable times. Hence it would be much better if the rest pauses were chosen for them. For instance, a 10-minute break in the middle of the morning and afternoon spells, during which the operatives remain at their machines, but take tea or other nutriment brought them by boys or by traveling canteens, has

been found a valuable aid to output in some munition works. Some types of work need longer and more frequent rest pauses than others, and the best times can be determined only by experiment. After being fixed they should be made compulsory and rest pauses at other times be checked so far as possible.

AMERICAN AND FOREIGN EXPERIENCE WITH THE SHORTER WORKDAY.

Studies of the effect of changes in hours of labor upon efficiency, such as the report reprinted above, are very few in number. Of these, the four briefly summarized below are of particular interest as representing experiences in different industries and in different countries.

COMMONWEALTH STEEL CO., GRANITE CITY, ILL.[1]

The workmen in the open-hearth department and boiler room were changed, in 1912, from a system of two 12-hour shifts to one of three 8-hour shifts. To do this required increasing the number of men in the open-hearth department from 22 to 33, but in the boiler room it was necessary to increase the number of men only from 8 to 10. The hourly wage rates of all the men concerned were increased an average of 20 per cent. Exactly the same products were made under the two systems of working hours.

Under the 8-hour system, in spite of the increase in hourly rates, there was a slight decrease in the cost of production, owing to the higher efficiency of the workers. There were very considerable reductions in the amount of pig iron charged and in the amount of fuel oil consumed. Also the quality of the product was very much improved.

ZEISS OPTICAL WORKS, JENA, GERMANY.[2]

The operation of these works was changed from a 9-hour to an 8-hour basis in 1900. In studying the effect of this change upon efficiency, comparison is made between the earnings of pieceworkers during the year preceding the change and the year following. The comparison involves 233 workmen. All were excluded whose output might have been affected by special causes, such as ill health, and also all who had not been in the firm's employ for at least 4 years and who were not at least 22 years of age. Piece rates remained the same.

Under the 8-hour system, as compared with the superseded 9-hour system, the hourly earnings of pieceworkers increased 16.2 per cent. This represents a greater daily output than before, inasmuch as a pieceworker, piece rates remaining the same, need only increase his hourly earnings 12½ per cent in order to produce as much, and thus obtain the same earnings under an 8-hour day as under a 9-hour day. Moreover, the increase of 16.2 per cent referred to was fairly uniform for different occupations and for workers of different age groups.

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[1] Report on conditions of employment in the iron and steel industry in the United States. S. Doc. No. 110, 62d Cong., 1st sess., Vol. III, p. 187.

[2] Abbé, Ernst. Die Volkwerbschaftliche Bedeutung der Verkürzung des industriellen arbeitstages. Jena, 1901. Digest in Goldmark's "Fatigue and Efficiency." New York, 1912. pp. 155–166.

ENGIS CHEMICAL WORKS, NEAR LIEGE, BELGIUM.[1]

Engaged in the manufacture of zinc blend and sulphuric acid. Principal employment of labor, oven tending. Started in 1888 with system of two 12-hour shifts. Changed four years later to the plan of three 8-hour shifts. Under the 12-hour shifts there were 10 hours of actual work. Under the 8-hour shifts there were 7½ hours of actual work. The furnaces were thus operated 22½ hours out of the 24, as against 20 hours previously.

Within 6 months after the change was effected the workers had equalled in 7½ hours the previous output of 10 hours, and the daily earnings for 7½ hours' work equaled the amount formerly earned in 10 hours. The total cost of production was reduced 20 per cent and the quality of the output improved. Also it was noted that the morale of the workers, as well as their physique, was raised to a much higher level.

SALFORD IRON WORKS, MANCHESTER, ENGLAND.[2]

Engaged in the manufacture of steam engines, pumping machinery, electrical machinery, etc. Number of employees, 1,200, about one-third being pieceworkers. For the 6 years prior to 1893 the hours of labor had been 54 per week during the first part of the period and 53 during the latter part. In 1893 a 48-hour week was introduced and careful records kept of costs and output for a year. No change occurred in the character of the work done, and the wages remained the same as before.

At the end of a year's time it was found that the amount of output for the year was slightly greater than the average of the 6 preceding years. Saving was affected in "wear and tear," fuel, etc., which balanced an increase of 0.4 per cent in wage cost. The reduction of hours also led to a rearrangement of working time. Previously it had been the custom of employees to have two meal periods at the plant, breakfast and lunch. With the shorter day the men had breakfast before coming to work. This was regarded as beneficial to the men and to their families as well as to the work.

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[1] Fromont, L. G. Une expérience industrielle de réduction de la journée de travail. Brussels, Leipzig, etc., 1906. (Institut Solvay.) Digest in Goldmark's "Fatigue and Efficiency," New York, 1912. pp. 144–155.

[2] "Eight Hours for Laborers on Government Work." A report of the Secretary of Commerce and Labor to the House Committee on Labor. Washington, 1905. pp. 78–81.

REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS, GREAT BRITAIN.

According to the report of the chief inspector of factories and workshops of Great Britain for the year 1915,[1] the most important part of the work undertaken by the department with a view to facilitating recruiting has been the institution of trade conferences to consider what measures of reorganization might be necessary in order to free as many men as possible for the army and how far the men so released could be replaced by other classes of labor. This reorganization of labor, it was found, involves the temporary suspension of trade rules and customs, and the points to be settled were chiefly those relating to the terms and conditions under which such suspension should take place. The operatives seemed to feel that those who left their employment to join the forces should be guaranteed a position when they returned, that suspension of rules should be regarded as a war emergency only, that there should be a return to former conditions at the end of the war, and that there should be a fair settlement of the wage question affecting the employment of women or other labor called in to take the place of men. As a result of these conferences, agreements were entered into between employers and employees in several of the more important industries, notably cotton, hosiery, woolen and worsted, silk, felt hat, printing, bleaching and dyeing, woodworking and furniture, boot, wholesale clothing, earthenware and china. These agreements, in general, provide for reinstatement of workers and a return to prewar conditions, the nonemployment of men eligible for military service, and, if necessary, the dismissal first of men of military age, the extended employment of women, and a general readjustment of labor to meet the exigencies of war.

Although a large number of applications for orders were received from firms desiring a relaxation of certain regulations governing factory operation, the employment of labor, etc., the report notes a marked reduction in the amount of latitude sought and allowed. For instance, it is stated that the comparatively few fresh demands for permission to work on Sunday were confined to cases where sudden and unexpected emergencies had arisen or the processes were continuous. "Requests for Saturday afternoon work have also become less common, and there seems to be a more general recognition of the advantages of a week-end rest." Most of the applications for orders came from munition works which desired permission to work overtime. The general order affecting such work was the same as that in force the previous year, although it is being modified to bring the latitude allowed within the limits recommended by the health of munition workers committee.[1] This order provides for three schemes, as follows:

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[1] Great Britain. Home Office. Annual Report of the Chief Inspector of Factories and Workshops for the year 1915. London, 1916. 15 pp.

> 1. Overtime, with a limit of 5 hours per week for women, boys between 14 and 16, and girls between 16 and 18 years of age, and of 7½ hours for boys over 16 years and also (in a few cases of special urgency) for women.
> 2. Day and night shifts for women and boys over 16 years, and in certain cases for boys over 14 years of age.
> 3. Eight-hour shifts for women, girls over 16, and boys over 14 years of age.

In this connection the report notes a distinct tendency toward a reduction of hours in many factories, including some of the large munition firms.

> Sunday labor has been found to be more and more unsatisfactory; apart from the ill effects which must follow from a long-continued spell of working seven days a week, it too often results in loss of time on other days of the week and in consequent disorganization, and employers were perhaps the more ready therefore to accept the recommendations of the health of munitions workers committee that it should be abandoned.[2]

In a circular issued by the ministry of munitions the importance of a weekly rest period was pointed out in the following statement:

> The aim should be to work not more than 12 shifts per fortnight or 24 where double shifts are worked * * * Where three 8-hour shifts are worked, not less than two should be omitted on Sunday. It is, in the opinion of the minister, preferable to work a moderate amount of overtime during the week, allowing a break on Sunday, rather than work continuously from day to day. It is still more strongly his view that where overtime is worked in the week, Sunday labor is not desirable.

Specific industries in which overtime has been allowed are listed, with a record of the persons affected—in most cases women and young people over 14 or 16 years of age—and a statement of the latitude permitted.

It seems to be indicated by instances mentioned in the report that long spells of work without a break are not conductive to good output, and this has prompted the issuance of a rule providing that, so far as protected labor (that is, women and young persons) is concerned, the utmost extension of the unbroken spell to be allowed shall be 5 hours in textile and 5½ hours in nontextile work; and "save in the few cases where the normal period of employment is not exceeded, such extension is allowed only on a condition that tea or other hot refreshment is available in the rooms for the workers during the spell."

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[1] The recommendations of the committee as to hours of work and overtime are contained in their Memorandum No. 5, an account of which appeared in the MONTHLY REVIEW for June, 1916, pp. 77–79.

[2] See MONTHLY REVIEW for May, 1916, p. 66, for a digest of Memorandum No. 1, on Sunday labor, issued by the health of munitions workers committee.

The health of munition workers committee has reported that as regards munition works it "had not found that, as yet, the strain of long hours had caused any serious breakdown among the workers, though many general statements indicative of fatigue had been received,"[1] and this, the chief inspector states, is confirmed by the fact that "there is no evidence of any marked increase in the sickness rates; the inspectors have not found any number of individual cases, save amongst the foremen and managers and amongst some of the older men, where the workers admit having suffered in health; and there has been an almost entire absence of complaints that operatives are being taxed beyond their strength." However, it is admitted that there are indications of fatigue of a less serious kind. "Individual workers confess to feeling tired and to becoming 'stale'; there are complaints of bad timekeeping and there is a general tendency toward a reduction of hours. But fatigue of this kind is quickly overcome by a temporary rest from overtime, though the importance of such relief has not always received sufficient recognition."

Considerable attention was given by the chief inspector's staff to the matter of fencing machinery, means of escape in case of fire, ventilation and sanitation in factories—problems emphasized by the great increase in machinery, the long hours, the introduction of female labor into factories hitherto reserved entirely for men, and the general shortage of labor. Satisfactory progress along these lines is noted.

Special mention is given to the advance made in welfare work,[2] in the provision of canteens and mess-room accommodation, and in the arrangements for dealing with cases of sickness and injury, more particularly in munition works, "an effect that is likely to be felt and to spread long after the war is ended and to leave behind a permanent improvement in factory life."

IMMIGRATION IN SEPTEMBER, 1916.

The number of immigrant aliens admitted into the United States during the first 10 months of 1916 has been in excess of the number admitted during the corresponding months of 1915. There has also been an increase from month to month during all of the 10 months, with the exception of June, which showed a decrease of 0.8 per cent. These facts are brought out in the statement following.

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[1] Memorandum No. 5, entitled "Hours of Labor," was noted in the MONTHLY REVIEW for June, 1916, pp. 77–79.

[2] Memorandum No. 2, entitled "Welfare Supervision," prepared by the health of munition workers committee, was noted in the MONTHLY REVIEW for May, 1916, pp. 68, 69.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913, 1914, 1915, AND 1916.

Month.	1913	1914	1915	1916	
				Number.	Per cent increase over preceding month.
January	46,441	44,708	15,481	17,293	8.5
February	59,156	46,873	13,873	24,740	43.1
March	96,958	92,621	19,263	27,586	11.5
April	136,371	119,885	24,532	30,560	10.8
May	137,262	107,796	26,069	31,021	15.1
June	176,261	71,728	22,598	30,764	[1] .8
July	138,244	60,377	21,504	25,035	[1] 18.6
August	126,180	37,706	21,949	29,975	19.7
September	136,247	29,143	24,513	36,398	21.4
October	134,140	30,416	25,450	37,056	1.8

[1] Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during September, 1915 and 1916, was as follows:

IMMIGRANT ALIENS ADMITTED INTO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, SEPTEMBER, 1915 AND 1916.

Race.	Admitted.		Departing.	
	September, 1915.	September, 1916.	September, 1915.	September, 1916.
African (black)	424	929	77	83
Armenian	51	128	283	5
Bohemian and Moravian	96	40	4	2
Bulgarian, Servian, Montenegrin	294	200	78	17
Chinese	127	217	185	81
Croatian and Slavonian	76	22	14	....
Cuban	525	580	167	344
Dalmatian, Bosnian, Herzegovinian	4	5	1	1
Dutch and Flemish	472	437	56	53
East Indian	5	15	9	1
English	3,516	3,652	732	719
Finnish	335	560	16	74
French	1,588	2,992	188	190
German	1,024	793	109	64
Greek	1,759	5,448	636	191
Hebrew	1,202	2,328	15	23
Irish	2,303	2,296	171	252
Italian (north)	532	571	429	166
Italian (south)	2,028	5,228	16,075	876
Japanese	654	883	63	58
Korean	12	21	1	....
Lithuanian	57	60	8	4
Magyar	93	41	52	13
Mexican	765	1,877	24	73
Polish	335	341	33	14
Portuguese	1,308	741	301	205
Roumanian	67	38	18	6
Russian	264	362	302	697
Ruthenian (Russniak)	215	104	1	....
Scandinavian	1,729	1,915	204	492
Scotch	1,277	1,627	196	172
Slovak	51	32	11	2
Spanish	698	1,009	265	189
Spanish-American	192	319	44	30
Syrian	72	120	17	5
Turkish	21	59	2	4
Welsh	66	104	26	21
West Indian (except Cuban)	91	166	62	40
Other peoples	185	188	256	55
Not specified	....	....	1,041	956
Total	24,513	36,398	22,156	6,177

LIST OF EMPLOYERS WHO HAVE ESTABLISHED SOME FORM OF DISABILITY BENEFIT FUND.

A.

Acme Machinery Co., The	Cleveland	Ohio.
Adams & Westlake Co., The	Chicago	Ill.
Allburn, C. & C., Co	McCarr	Ky.
Allis-Chalmers Manufacturing Co	Milwaukee	Wis.
Alpha Portland Cement Co	Easton	Pa.
American Engineering Co	Philadelphia	Pa.
American Hard Rubber Co	New York	N. Y.
American Iron & Steel Manufacturing Co	Lebanon	Pa.
American-LaFrance Fire Engine Co	Elmira	N. Y.
American Manganese Steel Co	Chicago Heights	Ill.
American Rolling Mill Co	Middletown	Ohio.
American Rubber Co	Cambridge	Mass.
American Sales Book Co	Niagara Falls	N. Y.
American Seeding Machine Co., The	Richmond	Ind.
American Steel Foundries	Chicago	Ill.
American Tool Co	Boston	Mass.
Anderson Electric Car Co	Detroit	Mich.
Ann Arbor R. R. Co., The	Toledo	Ohio.
Armour & Co	Chicago	Ill.
Armstrong Cork Co	Pittsburgh	Pa.
Ashcroft Manufacturing Co., The	Bridgeport	Conn.
Ashland Iron & Mining Co	Ashland	Ky.
Atlantic Coast Line R. R. Co., The	Wilmington	N. C.
Atlas Portland Cement Co., The	Northampton	Pa.
Autocar Co., The	Ardmore	Pa.
Avery Co., The	Peoria	Ill.

B.

Baker-Vawter Co	Benton Harbor	Mich.
Ballard & Ballard Co	Louisville	Ky.
Ballou, B. A., & Co. (Inc.)	Providence	R. I.
Baltimore & Ohio R. R. Co., The	Baltimore	Md.
Barber-Colman Co	Rockford	Ill.
Barbour-Stockwell Co	Cambridge	Mass.
Barrett Leather Co	Little Falls	N. Y.
Bausch & Lomb Optical Co	Rochester	N. Y.
Beckwith, P. D., Estate of (Inc.)	Dowagiac	Mich.
Benjamin-Washington Co., Alfred (Inc.)	New York	N. Y.
Berger Manufacturing Co., The	Canton	Ohio.
Bernstein Manufacturing Co	Philadelphia	Pa.
Berwick & Smith Co	Norwood	Mass.
Bethlehem Steel Co	Bethlehem	Pa.
Billings & Spencer Co., The	Hartford	Conn.
Bird & Son	East Walpole	Mass.
Bishop-Babcock-Becker Co	Cleveland	Ohio.

Bisler, G. A. (Inc.)	Philadelphia	Pa.
Blair, J. C., Co	Huntington	Pa.
Blake & Knowles Steam Pump Works	Cambridge	Mass.
Bliss, E. W., Co	Brooklyn	N. Y.
Bloomingdale Bros	New York	N. Y.
Blount Plow Works, The	Evansville	Ind.
Boston Elevated Ry. Co	Boston	Mass.
Bowser, S. F., & Co	Fort Wayne	Ind.
Bridgeport Brass Co	Bridgeport	Conn.
Briggs, D. F., Co	Attleboro	Mass.
Brill, J. G., Co	Philadelphia	Pa.
Bristol-Myers Co	Brooklyn	N. Y.
Brooklyn Rapid Transit Co	Brooklyn	N. Y.
Brown Hoisting Machinery Co	Cleveland	Ohio.
Brown & Sharpe Manufacturing Co	Providence	R. I.
Buckeye Engine Co	Salem	Ohio.
Buckeye Iron & Brass Works	Dayton	Ohio.
Buckstaff Co	Oshkosh	Wis.
Buda Co., The	Harvey	Ill.
Buffalo Forge Co	Buffalo	N. Y.
Buffalo Gasoline Motor Car Co	Buffalo	N. Y.
Builders Iron Foundry	Providence	R. I.
Bullard Machine Tool Co	Bridgeport	Conn.
Burk Bros. (Inc.)	Philadelphia	Pa.
Burroughs Adding Machine Co	Detroit	Mich.
Burt, F. N., Co. (Ltd.)	Buffalo	N. Y.

C.

C. & C. Electric Manufacturing Co	Garwood	N. J.
Cadillac Motor Car Co., The	Detroit	Mich.
Calumet & Hecla Mining Co	Calumet	Mich.
Calvert Lithographing Co	Detroit	Mich.
Cambria Steel Co., The	Johnstown	Pa.
Canton Stamping & Enameling Co., The	Canton	Ohio.
Carbon Hill Coal Co., The	Carbonado	Wash.
Carborundum Co., The	Niagara Falls	N. Y.
Carnegie Steel Co	Pittsburgh	Pa.
Carpenter Steel Co., The	Reading	Pa.
Cedar Hill Coal & Coke Co., The	Denver	Colo.
Celfor Tool Co., The	Buchanan	Mich.
Celluloid Co., The	Newark	N. J.
Challenge Cutlery Corporation, The	Bridgeport	Conn.
Challenge Machinery Co., The	Grand Haven	Mich.
Champion Copper Co., The	Painesdale	Mich.
Chase, J. I., Plow Works	Racine	Wis.
Cheney Bros	South Manchester	Conn.
Chesapeake & Ohio Railway Co	Richmond	Va.
Chicago, Burlington & Quincy Railroad Co	Chicago	Ill.
Chicago City Railway Co	Chicago	Ill.
Chicago, Milwaukee & St. Paul Railway Co	Seattle	Wash.
Chicago Pneumatic Tool Co	New York	N. Y.
Chicago Steel Foundry Co	Chicago	Ill.
Chicago Wheel Manufacturing Co	Chicago	Ill.
Churchill & Olden Co	Brockton	Mass.
Clark Textile Co	Saratoga Springs	N. Y.

Clark Thread Co., The	Newark	N. J.
Cleveland Automatic Machine Co	Cleveland	Ohio.
Cleveland-Cliffs Iron Co., The	Ishpeming	Mich.
Cleveland Twist Drill Co	Cleveland	Ohio.
Coal & Coke Railway Co	Elkins	W.Va.
Collins, A. M., Manufacturing Co	Philadelphia	Pa.
Colorado & Southern Railway Co., The	Denver	Colo.
Computing Scale Co	Dayton	Ohio.
Conkling-Armstrong Terra Cotta Co	Philadelphia	Pa.
Connersville Blower Co	Connersville	Ind.
Consolidated Gas Co. of N. Y	New York	N. Y.
Continental Coal Corporation	Wallsend	Ky.
Continental Gin Co	Birmingham	Ala.
Cooper, C. & G. Co., The	Mount Vernon	Ohio.
Copper Queen Consolidated Mining Co	Bisbee	Ariz.
Cousins, J. & T., & Co	Brooklyn	N. Y.
Cramp, Wm., & Sons, Ship & Engine Building Co	Philadelphia	Pa.
Crawford, McGregor & Canby Co., The	Dayton	Ohio.
Crocker-Wheeler Beneficial Association, The	Ampere	N. J.
Crouse-Hinds Co	Syracuse	N. Y.
Curtis Lumber & Millwork Co	Clinton	Iowa.

D.

Dain Manufacturing Co	Ottumwa	Iowa.
Davidson Bros. Co	Sioux City	Iowa.
Dayton Manufacturing Co., The	Dayton	Ohio.
Deming Co	Salem	Ohio.
Deere & Co	Moline	Ill.
Deere & Mansure Co	Moline	Ill.
Dennison Manufacturing Co	South Framingham	Mass.
Denny-Renton Clay & Coal Co	Renton	Wash.
Denver Tramway Co., The	Denver	Colo.
Detrick & Harvey Machine Co	Baltimore	Md.
Dold, Jacob, Packing Co	Buffalo	N. Y.
Donnelly, R. R., & Sons Co	Chicago	Ill.
Donohoe Coke Co	Greenwald	Pa.
Draper Co	Hopedale	Mass.
Dunn & McCarthy	Auburn	N. Y.

E.

Eastern Malleable Iron Co., The	Bridgeport	Conn.
Edison, Thomas A. (Inc.)	Orange	N. J.
Eisenlohr, Otto, & Bros. (Inc.)	Boyertown	Pa.
Emerson-Brantingham Co	Rockford	Ill.
Empire Steel & Iron Co	Catasauqua	Pa.
Excelsior Needle Co	Torrington	Conn.

F.

Faber, Eberhard, Pencil Co	Brooklyn	N. Y.
Farley & Loetscher Manufacturing Co., The	Dubuque	Iowa.
Farquhar, A. B., Co. (Ltd.)	York	Pa.
Farr Alpaca Co	Holyoke	Mass.
Fels & Co	Philadelphia	Pa.
Felt & Tarrant Manufacturing Co	Chicago	Ill.
Filene's, William, Sons Co	Boston	Mass.

Firth & Foster Co	Philadelphia	Pa.
Fisk Rubber Co., The	Chicopee Falls	Mass.
Flint & Walling Manufacturing Co	Kendallville	Ind.
Foerderer, Robert H. (Inc.)	Philadelphia	Pa.
Foot, Schulze & Co	St. Paul	Minn.
Forbes Lithograph Manufacturing Co., The	Boston	Mass.
Fore River Shipbuilding Corporation	Quincy	Mass.
Fork Ridge Coal & Coke Co	Fork Ridge	Tenn.
Fort Wayne Electric Works	Fort Wayne	Ind.
Fox Bakery, General Baking Co	Boston	Mass.
Fox, Charles K. (Inc.)	Haverhill	Mass.
Franklin, H. H., Manufacturing Co	Syracuse	N. Y.
French & Hecht	Davenport	Iowa.
Frick Co., The	Waynesboro	Pa.
Fulton Bag & Cotton Mills	Atlanta	Ga.

G.

Gamewell Fire Alarm Telegraph Co., The	Newton Upper Falls	Mass.
Garvin Machine Co	New York	N. Y.
General Chemical Co	New York	N. Y.
General Electric Co	Schenectady	N. Y.
General Fire Extinguisher Co	Providence	R. I.
Gibson, William D., Co., The	Chicago	Ill.
Ginn & Co	Boston	Mass.
Globe-Wernicke Co., The	Cincinnati	Ohio.
Goodman Manufacturing Co	Chicago	Ill.
Goodrich, B. F., Co., The	Akron	Ohio.
Goodyear Tire and Rubber Co., The	Akron	Ohio.
Gorham Manufacturing Co	Providence	R. I.
Grand Rapids Railway Co	Grand Rapids	Mich.
Grand Rapids Refrigerator Co	Grand Rapids	Mich.
Grand Rapids Show Case Co	Grand Rapids	Mich.
Grand Trunk Railway Co	Montreal	Can.
Graton & Knight Manufacturing Co., The	Worcester	Mass.
Gurley, W. & L. E	Troy	N. Y.
Gutta Percha & Rubber Manufacturing Co	New York	N. Y.

H.

Haines, Jones & Cadbury Co	Philadelphia	Pa.
Hale & Kilburn Co	Philadelphia	Pa.
Hall & Brown Wood Working Machine Co	St. Louis	Mo.
Hardwicke, A. H. G., Employees' Association	Niagara Falls	N. Y.
Harned & Von Maur's	Davenport	Iowa.
Harrisburg Foundry & Machine Works	Harrisburg	Pa.
Hazel-Atlas Glass Co	Wheeling	W. Va.
Heald Machine Co., The	Worcester	Mass.
Heaps Coal Co	Boone	Iowa.
Heller Bros. Co	Newark	N. J.
Hendey Machine Co., The	Torrington	Conn.
Hendrie & Bolthoff Manufacturing & Supply Co	Denver	Colo.
Hill Publishing Co	New York	N. Y.
Homestake Mining Co	Lead	S. Dak.
Hubbard, Eldridge & Miller	Rochester	N. Y.
Huber Manufacturing Co	Marion	Ohio.
Hutting Sash & Door Co	St. Louis	Mo.

Huyck, F. C., & Sons	Albany	N. Y.
Hyatt Roller Bearing Co	Harrison	N. J.
Hydraulic Power Co., and Cliff Electric Distributing Co	Niagara Falls	N. Y.

I.

Industrial Works	Bay City	Mich.
Ingersoll-Rand Co	New York	N. Y.
Interborough Rapid Transit Co	New York	N. Y.
Interior Hardwood Co	Indianapolis	Ind.
International Harvester Co	Chicago	Ill.
International Time Recording Co	Endicott	N. Y.
Iowa Dairy Separator Co	Waterloo	Iowa.
Iron City Sanitary Manufacturing Co	Zelionople	Pa.
Irons & Russell Co	Providence	R. I.
Isle Royale Cooper Co	Houghton	Mich.

J.

Jackson Automobile Co	Jackson	Mich.
Jamestown Worsted Mills	Jamestown	N. Y.
Jeffrey Manufacturing Co	Columbus	Ohio.
Joseph & Feiss Co., The	Cleveland	Ohio.

K.

Kansas City Southern Railway Co., The	Kansas City	Mo.
Kayser, Julius, & Co	Brooklyn	N. Y.
Keeler, E., Co., The	Williamsport	Pa.
Kelly Springfield Motor Truck Co., The	Springfield	Ohio.
Ketterlinus Litho Manufacturing Co	Philadelphia	Pa.
Keuffel & Esser Co	Hoboken	N. J.
Keystone Driller Co., The	Beaver Falls	Pa.
Killian Co., The	Cedar Rapids	Iowa.
Kimball, W. W., Co	Chicago	Ill.
Kingan & Co. (Ltd.)	Indianapolis	Ind.
Kirk Latty Mfg. Co	Cleveland	Ohio.
Kohler & Campbell	New York	N. Y.
Krakauer Bros	New York	N. Y.
Krueger, Gottfried, K. U. V	Newark	N. J.

L.

Laidlaw-Dunn-Gordon Co	Cincinnati	Ohio.
Lansing Co	Lansing	Mich.
Larkin Co., The	Buffalo	N. Y.
Larnde, Carter & Co	Detroit	Mich.
Leans, Roderick, Manufacturing Co	Mansfield	Ohio.
Leffel, James, Co., The	Springfield	Ohio.
Lehigh Coal & Navigation Co., The	Philadelphia	Pa.
Lester Piano Co., The	Philadelphia	Pa.
Libby, McNeil & Libby	Chicago	Ill.
Library Bureau	Cambridge	Mass.
Lieber, H., Co., The	Indianapolis	Ind.
Lindsey Wire Weaving Co., The	Cleveland	Ohio.
Link Belt Co., The	Chicago	Ill.
Locomobile Co	Bridgeport	Conn.
Lodge & Shipley Machine Tool Co	Cincinnati	Ohio.

Long Island Railroad Co., The	New York	N. Y.
Lord & Taylor	New York	N. Y.
Louisville Railway Co	Louisville	Ky.
Lovell, McConnell Manufacturing Co	Newark	N. J.
Lowe Bros. Co	Dayton	Ohio.
Lukenheimer Co., The	Cincinnati	Ohio.
Lukens Iron & Steel Co., The	Coatesville	Pa.

M.

Maddock's, Thomas, Sons Co	Trenton	N. J.
Majestic Manufacturing Co	St. Louis	Mo.
Manning, Maxwell & Moore	New York	N. Y.
Marion Steam Shovel Co., The	Marion	Ohio.
Massey Harris Co	Toronto	Can.
Maytag Co., The	Newton	Iowa.
McCallum Hosiery Co	Northampton	Mass.
McClary Manufacturing Co., The	London, Ont	Can.
McCray Refrigerator Co	Kendallville	Ind.
McKesson & Robbins	New York	N. Y.
Mellin's Food Co	Boston	Mass.
Mercer Iron & Coal Co	Stoneboro	Pa.
Mergott, J. E., Co., The	Newark	N. J.
Merrow Machine Co., The	Hartford	Conn.
Meyers, Fred J., Manufacturing Co	Hamilton	Ohio.
Michaels Stern & Co	Rochester	N. Y.
Michigan Bolt & Nut Works, The	Detroit	Mich.
Midvale Steel Co., The	Philadelphia	Pa.
Miehle Printing Press & Manufacturing Co	Chicago	Ill.
Mietz & Weiss Machine Shop & Iron Foundry, The	New York	N. Y.
Milburn Wagon Co., The	Toledo	Ohio.
Miles, Dr., Medical Co	Elkhart	Ind.
Miller, Edward, & Co	Meriden	Conn.
Miner-Hillard Milling Co	Wilkes-Barre	Pa.
Mishawaka Woolen Manufacturing Co., The	Mishawaka	Ind.
Montgomery Ward & Co	Chicago	Ill.
Monument Pottery Co	Trenton	N. J.
Morris Machine Works	Baldwinsville	N. Y.
Morris, Phillip & Co. (Ltd.)	New York	N. Y.
Morton Manufacturing Co	Muskegon Heights	Mich.

N.

Narragansett Machine Co	Providence	R. I.
National Cash Register Co	Dayton	Ohio.
National Meter Co	New York	N. Y.
National Tube Co	Pittsburgh	Pa.
Nelson Matter Furniture Co	Grand Rapids	Mich.
Nettleton, A. E., Co	Syracuse	N. Y.
Nevada, California & Oregon Ry	Reno	Nev.
New England Confectionery Co	Boston	Mass.
New England Structural Co	Everett	Mass.
New Haven Clock Co	New Haven	Conn.
New Process Gear Corporation	Syracuse	N. Y.
Newton Machine Tool Works (Inc.)	Philadelphia	Pa.
Niagara Falls Power Co	Niagara Falls	N. Y.

Nordyke & Marmon Co	Indianapolis	Ind.
Northwestern Knitting Co	Minneapolis	Minn.
Norton Iron Works	Ashland	Ky.

O.

Oakville Co	Waterbury	Conn.
Ohio Brass Co., The	Mansfield	Ohio.
Ohio Electric Railway Co., The	Springfield	Ohio.
Ohio Valley Pulley Works, The	Maysville	Ky.
Ohio & Colorado Smelting & Refining Co	Salida	Colo.
Okonite Co., The	New York	N. Y.
Oneida Community, Ltd	Oneida	N. Y.
Oneida Steel Pulley Co	Oneida	N. Y.
Onondaga Pottery Co	Syracuse	N. Y.
Ontario Silver Co., The	Muncie	Ind.
Osceola Consolidated Mining Co., The	Osceola	Mich.
Oshkosh Employees Benefit Association, The	Oshkosh	Wis.

P.

Pacific Coast Co	Seattle	Wash.
Parlin & Orendorff Co	Canton	Ill.
Parry Manufacturing Co	Indianapolis	Ind.
Pass & Seymour (Inc.)	Solvay	N. Y.
Paulle, L. Co	Minneapolis	Minn.
Peck Brothers & Co	New Haven	Conn.
Peerless Rubber Co	New York	N. Y.
Penn Hardware Co., The	Reading	Pa.
Pennsylvania Railroad Voluntary Relief Association (East of Pittsburgh)	Philadelphia	Pa.
Pennsylvania Railroad Voluntary Relief Association (West of Pittsburgh)	Cleveland	Ohio.
Peoples Gas Light & Coke Co	Chicago	Ill.
Petroleum Iron Works, The	Sharon	Pa.
Philadelphia Electric Co	Philadelphia	Pa.
Philadelphia & Reading Railway Co	Philadelphia	Pa.
Pierce Arrow Motor Car Co., The	Buffalo	N. Y.
Piqua Handle & Manufacturing Co., The	Piqua	Ohio.
Pittsburgh Coal Co	Pittsburgh	Pa.
Plant, Thomas G. Co	Boston	Mass.
Plymouth Cordage Co	Plymouth	Mass.
Porter, H. K. Co	Pittsburgh	Pa.
Potter, Thomas Sons & Co. (Inc.)	Philadelphia	Pa.
Potter & Johnston	Pawtucket	R. I.
Pratt Cady Co., Inc	Hartford	Conn.
Pratt & Whitney Co	Hartford	Conn.
Proctor & Gamble Co., The	Cincinnati	Ohio.
Proximity Manufacturing Co	Greensboro	N. C.
Public Service Corporation of New Jersey	Newark	N. J.
Puget Sound Traction & Power Co	Seattle	Wash.
Pullman Co., The	Chicago	Ill.

R.

Reading Rubber Manufacturing Co	Reading	Mass.
Reed Manufacturing Co	Erie	Pa.
Regal Shoe Co	Boston	Mass.
Regina Co., The	Rahway	N. J.

Remington Arms-Union Metallic Cartridge Co	New York	N. Y.
Republic Iron & Steel Co	Duluth	Minn.
Republic Iron & Steel Co	Youngstown	Ohio.
Rich, W. & Bros. Co	Atlanta	Ga.
Richard & Boynton Co	Dover	N. J.
Riverside Portland Cement Co	Riverside	Cal.
Robbins & Myers Co., The	Springfield	Ohio.
Rogers Peet Co	New York	N. Y.
Rome Brass & Copper Co	Rome	N. Y.
Root, A. I. Co	Medina	Ohio.
Rossi Saddlery Co	St. Joseph	Mo.
Royal Furniture Co	Grand Rapids	Mich.
Rueckheim Bros. & Eckstein	Chicago	Ill.
Rumford Chemical Works	Providence	R. I.
Russell & Erwin Manufacturing Co	New Britain	Conn.

S.

Saco Lowell Shops	Boston	Mass.
Samson & Sessions Co	Cleveland	Ohio.
Scranton Forging Co	Scranton	Pa.
Seagrave Co., The	Columbus	Ohio.
Sears, Roebuck & Co	Chicago	Ill.
Seneca Falls Manufacturing Co., The	Seneca Falls	N. Y.
Sharon Steel Hoop Co	Sharon	Pa.
Sheldon Axle & Spring Co	Wilkes-Barre	Pa.
Shenango Furnace Co., The	Duluth	Minn.
Sherwin-Williams Co., The	Cleveland	Ohio.
Shimer, Samuel J., Sons	Milton	Pa.
Simmons, R. F., Co	Attleboro	Mass.
Simonds Manufacturing Co	Fitchburg	Mass.
Simon, R. & H., Co	Union Hill	N. J.
Skinner Engine Co	Erie	Pa.
Sloss Sheffield Steel & Iron Co	Birmingham	Ala.
Smith, The A. O., Co	Milwaukee	Wis.
Smith, S. Morgan, Co	York	Pa.
Smith & Wesson	Springfield	Mass.
Solvay Process Co	Syracuse	N. Y.
Southern Pacific Co	New York	N. Y.
Southern Railway Co	Washington	D. C.
Splitdorf Electrical Co	Newark	N. J.
St. Joseph & Grand Island Railway Co., The	St. Joseph	Mo.
St. Louis & San Francisco Railroad	St. Louis	Mo.
St. Louis, San Francisco & Texas Railway; Fort Worth & Rio Grande Railway; Brownwood, North & South Railway	Fort Worth	Tex.
St. Marys Wheel & Spoke Co	St. Marys	Ohio.
Stag Canon Fuel Co	Dawson	N. Mex.
Standard Co., The	Geneva	N. Y.
Standard Paint Co., The	Boundbrook	N. J.
Standard Paint Co., The	New York	N. Y.
Standard Roller Bearing Co	Philadelphia	Pa.
Standard Welding Co., The	Cleveland	Ohio.
Stanley Rule & Level Co., The	New Britain	Conn.
Stanley Works, The	New Britain	Conn.

Starrett, L. S., Co., The	Athol	Mass.
Steinway & Sons	New York	N. Y.
Stetson Shoe Co	South Weymouth	Mass.
Stokes & Smith Co	Philadelphia	Pa.
Strauch Bros	New York	N. Y.
Surpass Leather Co	New York	N. Y.
Susquehanna Coal Co	Philadelphia	Pa.
Susquehanna Silk Mills	Sunbury	Pa.
Swett, A. S., Iron Works	Medina	N. Y.
Swift & Co.,	Chicago	Ill.
Sybold Machine Co., The	Dayton	Ohio.
Syracuse Chilled Plow Co	Syracuse	N. Y.

T.

Tabor Manufacturing Co	Philadelphia	Pa.
Taft & Pennoyer Co	Oakland	Cal.
Transue & Williams Co., The	Alliance	Ohio.
Traut & Hine Manufacturing Co	New Britain	Conn.
Triumph Electric Co	Cincinnati	Ohio.
Trumbull Electric Manufacturing Co., The	Plainville	Conn.
Tubular Rivet Co	Quincy	Mass.
Tufts, Nathaniel, Meter Co	Boston	Mass.

U.

Underwood Typewriter Co	Hartford	Conn.
Union Drawn Steel Co	Beaver Falls	Pa.
Union Pacific System	Omaha	Nebr.
Union Switch & Signal Co., The	Swissvale	Pa.
United States Glass Co	Pittsburgh	Pa.
United States Headlight Co	Buffalo	N. Y.
United States Steel Co	Canton	Ohio.
Universal Winding Co	Providence	R. I.

V.

Venango Manufacturing Co., The	Franklin	Pa.
Victor Talking Machine Co	Camden	N. J.
Vilter Manufacturing Co	Milwaukee	Wis.
Vulcan Iron Works	Wilkes-Barre	Pa.
Vulcan Plow Co., The	Evansville	Ind.
Vulcanite Portland Cement Co	Phillipsburg	N. J.

W.

Wadsworth Watch Case Co	Dayton	Ky.
Walden Knife Co	Walden	N. Y.
Walworth Manufacturing Co	Boston	Mass.
Warner & Swasey Co., The	Cleveland	Ohio.
Washington Railway & Electric Co	Washington	D. C.
Washington Terminal Co	Washington	D. C.
Washington Water Power Co., The	Spokane	Wash.
Waterbury Clock Co	Waterbury	Conn.
Wayne Knitting Mills	Fort Wayne	Ind.
Weaver Organ & Piano Co	York	Pa.
Wellman-Seaver-Morgan Co., The	Cleveland	Ohio.
Wells Bros. Co	Greenfield	Mass.
Welsbach Co., The	Gloucester	N. J.
Werner Co	Akron	Ohio.

Western Electric Co	Chicago	Ill.
Western Maryland Railway Co	Baltimore	Md.
Western Union Telegraph Co., The	New York	N. Y.
Westinghouse Air Brake Co., The	Wilmerding	Pa.
Westinghouse Electric & Manufacturing Co	East Pittsburgh	Pa.
Westinghouse Machine Co., The	East Pittsburgh	Pa.
White Sewing Machine Co	Cleveland	Ohio.
Whitney Manufacturing Co	Hartford	Conn.
Widdicomb Furniture Co., The	Grand Rapids	Mich.
Wilcox & White Co	Meriden	Conn.
Wiley & Russell Manufacturing Co	Greenfield	Mass.
Will & Baumer Co	Syracuse	N. Y.
Williams, I. B. & Sons	Dover	N. H.
Williams & White Co	Moline	Ill.
Winslow Bros. Co	Chicago	Ill.
Wood, S. A. Machine Co	Boston	Mass.
Woolf & Shulhof	New York	N. Y.

Y.

Yale Brewing Co., The	New Haven	Conn.
Yale & Towne Manufacturing Co., The	Stamford	Conn.
York, J. W. & Sons	Grand Rapids	Mich.
York Manufacturing Co	York	Pa.
York Safe & Lock Co	York	Pa.
Youngstown Sheet & Tube Co	Youngstown	Ohio.

Z.

Zions Cooperative Mercantile Institution	Salt Lake City	Utah.

OFFICIAL PUBLICATIONS RELATING TO LABOR.

UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. Boiler safety orders, effective January 1, 1917. [Sacramento], 1916. 147 pp.*

These are the commission's orders, prepared under authority of the workmen's compensation insurance and safety act. The orders are the result of consultation with general safety orders committees organized in San Francisco and Los Angeles and representing employers and employees who would be affected by the application of the orders.

—— —— *Bulletin No. 2, relating to safety and efficiency in mines, May, 1916. [Sacramento], 1916. 15 [1] pp.*

One of a series of bulletins which will discuss the causes and prevention of accidents in connection with some particular phase of mining.

ILLINOIS.—*Industrial Board. Third annual report for the year ending June 30, 1916. Springfield, 1916. 69 pp.*

Reports the operation of the workmen's compensation law, giving statistical data concerning 16,869 accidents (closed cases) filed by 5,670 employers during the calendar year ending December 31, 1915. There were 125 fatal-accident cases disposed of by the board. Compensation amounting to $1,075,287 and medical expenses amounting to $217,448 were paid in the 16,869 cases. A more complete digest of this report will appear in a future issue of the REVIEW.

MASSACHUSETTS.—*State Board of Labor and Industries. Suggestions to employers and employees for the protection of eyes and the prevention of accidents. Boston, 1916. 10 pp. (Industrial Bulletin No. 5.)*

—— —— *Rules and regulations suggested for the prevention of anthrax. Boston, 1916. 10 pp. (Industrial Bulletin No. 6.)*

—— —— *Rules and regulations governing compressed-air work. Boston, 1916. 12 pp. (Industrial Bulletin No. 7.)*

—— —— *Third annual report, January, 1916. Boston, 1916. 140 pp.*

MICHIGAN. MARQUETTE COUNTY.—*Inspector of Mines. The annual report of inspector of mines for the year ending September 30, 1916. 18 pp.*

Contains a descriptive account of 12 fatal accidents occurring in the mines of Marquette County, and also notes the occurrence of 226 serious accidents and 539 slight injuries. These accidents are classified by causes. The following summary table is submitted:

Total number of mines in operation	33
Total number of quarries	6
Total number of men employed underground	3, 332
Total number of men employed on surface	1, 578
Total number of men employed in quarries	135
Total number of men employed in and about the mining industry	5, 045
Total number of fatal accidents	13
Total number of fatal accidents per thousand men underground	3. 3
Total number of fatal accidents per thousand men on surface	1. 27
Total number of fatal accidents per thousand men engaged in the mining industry	2. 58

NEW YORK.—*State Department of Labor. The labor law and the industrial code with amendments, additions, and annotations to July 1, 1916. Prepared by the Bureau of Statistics and Information. Albany, 1916. 258 pp.*

This volume, printed in advance from the annual report of the Department of Labor for 1916, gives the text of the general labor law (ch. 31, Consolidated Laws) and of the Industrial Code (comprising rules and regulations supplementary to the labor law) and the penal provisions relating thereto. A full index appears at the end of the volume. In notes are given cross references to laws and to court decisions or opinions of the Attorney General construing the laws.

—— *State Industrial Commission. Monthly bulletin. Albany, October, 1916.*

Current reports on the work of the Commission, rulings under the State industrial code, operations of the State fund, legal decisions under the compensation act, work of the Bureau of Mediation and Arbitration, and review of the labor market. Outlines the work of the first State safety congress, which will be held under the auspices of the commission at Syracuse on December 11, 12, 13, and 14.

—— *University of the State of New York. Division of agricultural and industrial education. Vocational training of girls in the State of New York, by Anna C. Hedges, State specialist in vocational education of girls. Albany, 1915. 41 pp. Plates. (Bulletin No. 612, Apr. 1, 1916.)*

RHODE ISLAND.—*Twenty-ninth annual report of the commissioner of industrial statistics. Providence, 1916. 108 pp.*

Reports the activities of the commissioner of industrial statistics largely in connection with duties involving the State workmen's compensation act; the compilation of a card index on the rates of wages in the industries of the State; in recording strikes; in assisting the unemployed to obtain work and in furnishing general statistical information pertaining to the State. The tables on rates of wages show a material increase in rates and a reduction in hours of labor in many occupations particularly where women are employed. The tables on workmen's compensation show that 2,330 establishments are under the act, a gain of 113 over the preceding year. The average number of wage earners under the act in 1915 was 154,538, a grain of 2,133 over the number employed in 1914. There were 11,611 accidents in establishments under the act, and 31 deaths; a total of $216,372.20 was paid out on account of accidents and deaths. A digest of this report will appear in a future issue of the REVIEW.

TENNESSEE.—*Department of workshop and factory inspection. Third annual report for the fiscal year beginning December 1, 1914, and ending December 1, 1915. Nashville [1916]. v., 75 pp.*

This report declares that there has been a general awakening of public interest in working conditions in industry, as manifested through civic organizations, boards of trade, chambers of commerce, manufacturers' associations, and women's clubs. "And this awakened public conscience has been in a large measure brought about by the activity and interest exercised by organized labor in this State." In the course of the year the inspector discovered 99 child workers illegally employed; in 65 instances minors between 14 and 16 were employed without affidavits or certificates, and in 34 cases were under age (14 years).

The following table is compiled from the recapitulatory statement of the report:

WORK OF TENNESSEE DEPARTMENT OF WORKSHOP AND FACTORY INSPECTION FOR THE THREE FISCAL YEARS ENDING DECEMBER 1, 1915.

Year ending Dec. 1—	Inspections made.		Court cases disposed of.	Minors 14 to 16 found working without proper affidavits.	Minors under 14 dismissed from service.	Accidents reported.	
	Regular.	Special.				Nonfatal.	Fatal.
1913	1,487	180	9	483	94	14	1
1914	825	970	11	178	69	421	7
1915	934	1,352	21	65	34	434	14
Total	3,246	2,502	41	726	197	869	22

UNITED STATES.—*Bureau of Mines. The nitration of toluene, by E. J. Hoffman. Washington, 1916. 32 pp. (Technical Paper 146.)*

—— *Children's Bureau. A tabular statement of infant welfare work by public and private agencies in the United States, by Etta R. Goodwin. Washington, 1916. 114 pp. (Infant mortality series No. 5; Bureau publication No. 16.)*

The report represents an effort to outline the extent of the work carried on in the United States for the reduction of infant mortality. It presents for each State and for each city of 10,000 population and over, according to the census of 1910, a statement of the civic measures for the reduction of the infant death rate, and indicates the infant-welfare work by private agencies in these cities and characteristic work in some smaller communities. Full descriptions of the methods used by both public and private agencies will be furnished in another report now in preparation.

In collecting the information, schedules or inquiries were sent out early in 1915. These were addressed to the State health officers in all States, to the secretaries of all State colleges and universities, to health officers in cities of 10,000 population and over, and to private agencies. In this initial report a complete and original census of all phases of infant-welfare work by private agencies was not regarded as practicable. The choice of agencies addressed is the result of the investigations of individuals and agencies in close touch with infant-welfare activities in all sections of the country.

—— *Department of Agriculture. The normal day's work of farm implements, workmen, and crews in western New York. Washington, 1916. 16 pp. (Bulletin No. 412.)*

This bulletin is an attempt to analyze, on the basis of the experience of several hundred practical farmers in western New York, what should constitute a standard production or unit in the way of labor performed in the different operations of farming. The results are the average of records reported to the investigator by experienced farmers as to what constitutes a day's work under their conditions of farming. It is not a study of the question of hours of labor.

—— *Department of Commerce. Bureau of the Census. Mortality statistics, 1914: Fifteenth annual report. Washington, 1916. 714 pp.*

This report is based on the transcripts from the records of the registration area, which in 1914 had an estimated population of 65,989,295, or 66.8 per cent of the total estimated population of the United States. "The number of deaths registered was 898,059, corresponding to a death rate of 13.6 per thousand of population, the lowest ever recorded for the registration area."

The passage, during 1915, of "excellent laws for the registration of births and deaths" is noted in the case of Florida and Illinois.

FOREIGN COUNTRIES.

CANADA.—*Department of Labor. Ninth report of the registrar of the board of conciliation and investigation of proceedings under the industrial disputes investigation act, 1907, for the fiscal year ending March 31, 1916. Ottawa, 1916. 204 pp. (Appendix to the annual report of the Department of Labor.)* (See p. 16.)

—— *The Labor Gazette, issued by the Department of Labor by order of Parliament. Ottawa. October, 1916.*

Current reports on industrial conditions during September, proceedings under the industrial disputes investigation act, 1907, industrial disputes, wholesale and retail prices, fair wages schedules in Government contracts, legal decisions affecting labor, industrial accidents, and trade agreements. Contains special articles on employment for civic employees in eight cities in Canada, proceedings of the thirty-second annual convention of the Trades and Labor Congress of Canada, eighth annual convention of the Canadian Federation of Labor, and the eight-hour controversy on railways in the United States.

DENMARK.—*Statistiske Efterretninger udgivet af det Statistiske Departement. Copenhagen. September 23, 1916.*

Retail prices in September, 1916, savings-bank operations, 1914 to 1916, labor disputes, 1915, index number of the Economist.

FINLAND.—*Arbetsstatistisk tidskrift utgiven af Industristyrelsen i Finland. Helsingfors. 1916, No. 4.*

Employment office reports and retail prices for current months; special articles on labor conditions in sawmills, factory inspection in 1914, federation of Finnish employers, fatigue in industry, and notes from foreign countries.

GREAT BRITAIN.—*Board of Trade. Reports to the Board of Trade by inspection officers of railway department, of inquiries into certain accidents which occurred during six months ending June 30, 1916. 8, 12, 6, 8 pp.*

Contains separate reports submitting the evidence taken by special investigators appointed to inquire into the causes of certain railway accidents occurring in the United Kingdom during the period covered by the report.

INDIA.—*Department of Mines. Report of the chief inspector of mines in India under the Indian mines act (VIII of 1901), for the year ending 31st December, 1915. Calcutta, 1916. iv, 78 pp. Folded diagram.*

ITALY.—*Bollettino della Emigrazione. Commissariato della Emigrazione. Rome, July 15, 1916. (monthly.)*

Contains statistics of Italian emigration, legislation on immigration in foreign countries, and a special article on Italian immigrants in the United States (Washington, Idaho, Oregon, and Montana).

—— *Bollettino dell' Ufficio del Lavoro. Ministero per l'Industria, il Commercio e il Lavoro. Ufficio del Lavoro. Rome, September 16, 1916. (Semimonthly.)*

Current reports on the labor market, labor disputes, employers' and workmen's organizations, retail prices, court decisions affecting labor and labor legislation.

—— *Ministero di Agricultura, Industria e Commercio. Ufficio del Lavoro. Atti del consiglio superiore del lavoro. Twenty-second session, April, 1915. Rome, 1915. 335 pp. (Pubblicazione del ufficio del lavoro, Series A, No. 22.)*

Contains the minutes of the twenty-second session (April, 1915) of the superior labor council of Italy. At the session in question the council discussed legislation on industrial and agricultural employment offices, creation of a special court of arbitration (*commissione probivirale*) for labor connected with the shipping in the port of Genoa, and amendments of the laws on Sunday rest and employment of women and children.

NETHERLANDS.—*Maandschrift van het Centraal Bureau voor de Statistiek. The Hague, September, 1916.*

Current review of the industrial situation, unemployment and unemployment insurance, operations of the labor exchanges, recent strikes and lockouts, union rates of wages and hours of labor, trade-union activities, movement of wholesale and retail prices, and emigration. Contains special articles on war emergency measures affecting labor and social conditions in general; also a review of the labor market in foreign countries.

NEW SOUTH WALES.—*Department of Labor and Industry. Report on the working of the factories and shops act, 1912, during the year 1915. Sydney, 1916. 71 pp. 3 charts.*

According to this report the number employed on November 30, 1915, in the factories of New South Wales was 99,223 persons, of whom 71 per cent were males and 29 per cent females. The number of factories on the records of the department was 7,425. Beginning with July 1, 1915, the provisions of the factories and shops act of 1912 had been extended to include the whole State. In the new area coming under the operation of the act there were 1,178 factories, employing 5,912 persons, so that 6,247 factories and 93,311 persons were in the same area as that to which the figures for 1914 applied (see MONTHLY REVIEW, Vol. II, p. 422). These figures, therefore, show an increase of 254 factories and 3,170 persons employed at the end of 1915, as compared with the figures for 1914.

Certificates of fitness and permits to work were issued to 5,756 children under 16 years of age.

There were reported 432 accidents, of which 9 were fatal.

During the year 410 informations were laid for violation of the act. Convictions were obtained in 387 cases.

NEW ZEALAND.—*Board of Trade (report of the), regarding coal prices at Auckland. Wellington, 1916. 3 pp.*

The increases in prices of coal at Auckland, New Zealand, as reported by a company handling between 60 and 70 per cent of the local trade, which took place between August 1, 1914, and May 22, 1916, are explained as due to increased cost of production, enhanced prices of materials and supplies, increase of freight rates, increased taxation, and a serious diminution of output, due to shortage of miners.

"From the evidence before us we are of the opinion that the increase in the wholesale prices of coal * * * are fully warranted, and are not more than sufficient to enable the company to produce without loss."

The report suggests that improved methods of distribution might materially lessen the burden of rising prices.

NORWAY.—*Sociale Meddelelser utgit av Departementet for Sociale Saker. Christiania, 1916, No. 4.*

Current statement of retail prices, June to August, 1916; price increases in Norway, Sweden, and Copenhagen since the outbreak of the war; industrial conditions; cooperation in Germany; and operations of the Norwegian smallholdings bank.

ONTARIO.—*The Workmen's Compensation Act (4 Geo. V, chap. 25), with amendments of 1915 and 1916 (5 Geo. V, chap. 24, 6 Geo. V, chap. 31), with regulations of board, synopsis, etc. Printed by order of the Legislative Assembly of Ontario, 1916. Toronto, 1916. 122 pp.*

Contains the text and digest of the Ontario compensation act, with regulations for its application. A detailed index is provided.

QUEENSLAND.—*The Queensland Industrial Gazette, issued by the Department of Labor. Brisbane, September, 1916.* (*vol. 1, no. 7.*)

Contains current reports on the labor market, awards under the conciliation and arbitration act, industrial court decisions, factory accidents, operations of employment exchanges, etc.

SWEDEN.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm, 1916. No. 8.*

Current reports on the labor market, factory inspection, operations of war emergency commissions, review of retail and wholesale prices; special articles on the proposed industrial disputes act; work of the conciliation commissioners, 1907 to 1914; social questions before the recent session of Parliament; war emergency relief by municipalities; the sickness insurance congress at Eskilstuna; housing loans to municipalities from the general pension fund. Reproduces a special royal decree granting a State subsidy to public employment offices.

—— (*Stockholm.*) *Statistisk Månadsskrift utgiven av Stockholms stads Statistiska Kontor. Stockholm, August, 1916.*

Contains a special article on regular wage increases and special increases due to the increased cost of living arising from war conditions. Presents cost of living data by means of index numbers.

VICTORIA.—*Chief Inspector of Factories and Shops. Report for the year ended December 31, 1915. Melbourne, 1916. 171 pp.*

Presents data concerning the number of factories registered and number employed, average wages paid in trades under wage boards and in trades not under boards, overtime worked, prosecutions under the factories and shops act, accidents, and home workers.

The following table shows the number of factories registered and number employed and the number of accidents for the years 1912 to 1915:

NUMBER OF EMPLOYEES AND NUMBER OF ACCIDENTS IN REGISTERED FACTORIES IN VICTORIA, BY YEARS, 1912 TO 1915.

Year.	Number of factories registered.	Number of employees.			Accidents.		
		Male.	Female.	Total.	Total.	Number per 10,000 employees.	Fatal.
1912	7,750	65,491	39,255	104,746	389	37.1	....
1913	8,089	69,436	41,051	110,487	407	36.8	7
1914	8,447	70,562	40,098	110,660	391	35.3	4
1915	7,486	53,370	34,590	[1] 91,888	464	50.5	8

[1] Inclusive of 3,928 persons—employers and their children—working in factories.

The above table shows a decrease during 1915 of 961 factories and 18,772 employees, explained as more apparent than real, as it is partly due to a change in the method of enumeration. It is estimated that the real decrease is 461 factories and 1,274 employees.

The number of wage boards increased from 140 in 1914 to 146 in 1915, these 146 wage boards affecting about 150,000 employees. The report shows the minimum wages fixed for each occupation by the boards.

The number of home workers registered during the year was 2,768. Of this total 1,839 worked on underclothing and dresses, 762 on clothing and shirts, 149 on knitting, and the remaining 18 on miscellaneous manufactures.

Prosecutions for violations of the factories and shops act numbered 457. Convictions were obtained in 394 cases.

In reviewing the labor market the report states that during the first half of 1915 nearly all of the manufacturing industries were adversely affected by the consequences of the drought of 1914, and in a less degree by the war. Output was limited, except of war supplies, the manufacture of which was enormously increased. Trade in the latter half of the year revived with the improvement in the seasons. The supply in skilled occupations was short, especially skilled female machine operators for military clothing.

—— *Registrar of Friendly Societies. Report for the year 1915. Melbourne, [1916]. 7 pp.*

This report covers the matter of the official registration of the friendly societies, or fraternal societies as termed in the United States, building societies, provident societies (cooperative organizations, etc.), and trade-unions. The progress of legislation and judicial decisions affecting this class of organizations is also recorded. Statistics of membership are not given.

RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

ACTUARIAL SOCIETY OF AMERICA. *Transactions. Vol. XVI, part 1, No. 53, May 20 and 21, 1915. 256 pp.*

Contains in addition to other material, papers on the following subjects: "Should we prepare a new mortality table"; "Valuation of death benefits provided by the workmen's compensation law of New York"; "A staff pension fund."

—— —— *Vol. XVII, part 1, No. 55, May 18 and 19, 1916. 193 pp.*

In addition to other material, contains papers on mortality experience of Mutual Life Insurance Company of New York and of Worcester Fire Society, and a statement concerning the tentative plans for a new mortality investigation by the actuarial society with rules and instructions relating thereto.

AMALGAMATED SOCIETY OF CARPENTERS AND JOINERS. *Proceedings of general council, Manchester, England, June–August, 1916. 120 pp.*

—— *Fifty-sixth annual report, 1915. 228 pp.*

AMERICAN COTTON MANUFACTURERS' ASSOCIATION. *Proceedings of twentieth annual convention, Atlanta, Ga., April 4 and 5, 1916. 160 pp.*

AMERICAN FLINT GLASS WORKERS UNION. *Proceedings of thirty-ninth convention, Columbus, Ohio, July, 1915. 321 pp. Proceedings of fortieth convention, Tiffin, Ohio, July, 1916, 284 pp.*

AMERICAN GAS INSTITUTE. *Report of committee on analysis of accidents. Presented at eleventh annual meeting, October, 1916, by James B. Douglas, chairman. 6 pp.* (See p. 26.)

AMERICAN IRON AND STEEL INSTITUTE. *Annual statistical report for 1915. New York, 1916. 96 pp.*

—— *Yearbook, 1915. 571 pp.*

AMERICAN MINE SAFETY ASSOCIATION. *Second annual transactions, constitution, and by-laws. Philadelphia, January, 1915. 132 pp.*

AMERICAN MINING CONGRESS. *Report of proceedings of eighteenth annual session, San Francisco, September 20–22, 1915. 192 pp.*

AMERICAN PAPER AND PULP ASSOCIATION. *Thirty-ninth annual convention. New York, February, 1916. (In Paper Trade Journal, vol. 62, No. 7, February 17, 1916. pp. 241–329.)*

AMERICAN PRISON ASSOCIATION. *Proceedings of the annual congress, Oakland, Cal., October 9–14, 1915. 436 pp.*

BIRGE, WILLIAM S. *True food values and their low costs, or economy in living. New York, Sully & Kleinteich, 1916. 218 pp. Price, 50 cents.*

The object of the author is to give such information as may enable the ordinary individual to simplify the art of living and get his money's worth.

BOGART, ERNEST L., AND THOMPSON, C. M. *Readings in the economic history of the United States. New York, Longmans, Green & Co., 1916. 862 pp. Net price, $2.80.*

Designed to provide college classes with collateral reading on the economic history of the United States. Treats of agriculture, manufactures, tariffs, commerce, transportation, money and banking, labor, and movement of the population, and covers the period from 1607 to 1915.

BOWERS, EDWIN F. *Alcohol, its influence on mind and body. New York, Clode, 1916. 207 pp.*

Contains chapters relating to alcohol and accidents, efficiency as related to alcohol, and what industry thinks of alcohol.

BROOKLYN BUREAU OF CHARITIES. *Thirty-sixth annual report. Family and social welfare work. 1914–1915. 127 pp.*

—— *Tenement house committee. The progress of housing reform in Brooklyn. Report, 1916. 47 pp.*

BROTHERHOOD OF LOCOMOTIVE FIREMEN AND ENGINEMEN. *Constitution, revised and amended. Washington, D. C., June and July, 1913. 196 pp.*

BROTHERHOOD OF RAILROAD TRAINMEN. *Constitution and general rules, amended, Detroit, Mich., May to June, 1916. 151 pp.*

BROTHERHOOD OF RAILWAY CARMEN OF AMERICA. *Constitution revised, Milwaukee, Wis., September, 1913. 84 pp.*

BUREAU OF RAILWAY ECONOMICS. *List of references relating to the eight-hour working-day, October 19, 1916. 29 typewritten pages.*

CARMAN, FRANCIS A. *Canadian Government annuities. A study of our relation to the problem of poverty in old age. New York, Ginn & Co., 1915. Reprinted from Political Science Quarterly, Vol. XXX, No. 3, September, 1915. pp. 425–447.*

COAL AGE. *"Safety First" number, October 7, 1916. pp. 567–632.*

COLORADO FUEL & IRON CO., *Twenty-fourth annual report for the year ended June 30, 1916. Denver, 1916. 13 pp.*

COMPTON, WILSON. *The organization of the lumber industry. Chicago, American Lumberman, 1916. 153 pp.*

This study is principally concerned with the special influences which have determined the price of lumber in the United States.

CONFERENCE COMMITTEE OF MANAGERS. *(Railroads of western territory). Preliminary report of conference committee of managers appointed by the Association of Western Railways to represent certain railways in conference with the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen and Enginemen, February 9 to June 1, 1914. 163 pp.*

—— —— *Supplement A. Preliminary report of conference committee. July 14 to 18, 1914. 9 pp.*

—— —— *Supplement B. Preliminary report of conference committee. July 20 to August 3, 1914. 35 pp.*

—— —— *Interpretation of western arbitration award as applied to certain questions and answers of the Brotherhood of Locomotive Engineers and the Brotherhood of Locomotive Firemen and Enginemen. Chicago, July 1, 1915. 42 pp.*

Congdon, Leon A. *Fight for food. Philadelphia, Lippincott, 1916, 207 pp.*

The author undertakes to show how to provide nourishing diet at low cost in order to meet the problem of the high cost of living.

Consumers' League of Cincinnati (Ohio) (30 Pickering Building). *Bulletin No. 4. A study of restaurant kitchens. November, 1916. 10 pp.*

Craig, E. M. (*Compiler*). *Rates of wages per hour being paid in the building trades, July 1, 1916. 808 Chamber of Commerce Building, Chicago, Ill.*

A tabulation in chart form of wage rates in the building trades in 68 States of the United States and Canada, compiled by the secretary of the Chicago Builders' Association.

Dublin, Louis I., *of the Metropolitan Life Insurance Co., New York. Improvement of statistics of cause of death through supplementary inquiries to physicians. Reprinted from Quarterly Publications of the American Statistical Association, June, 1916. Pp. 175 to 191.*

—— *Interest of the community in cancer. Read before the New York Academy of Medicine, in association with the American Society for the Control of Cancer. May 18, 1916. 10 pp.*

—— *Mortality from external causes among industrial policyholders of the Metropolitan Life Insurance Co., 1911 to 1914. Read at the fifth meeting of the Casualty, Actuarial, and Statistical Society of America, February 25, 1916. Reprinted from the Proceedings of the Society, vol. II, Part II, No. 5. Pp. 187–194.*

—— *Occupational mortality experience of 94,269 industrial workers. 1916. 6 pp. Reprinted from American Journal of Public Health, Boston, vol. 6, No. 7.*

First-Aid Handbooks:

Alexander, Magnus W. *Safety in the foundry. National Founders' Association. Chicago, 1915. 187 pp.*

Bauer & Black. *A handbook of first aid in accidents, emergencies, poisoning, sunstroke, etc. Chicago and New York, 1915. 128 pp.*

Booher, James M. *Mechanical respiration; historical, physiological, technical. Life Saving Devices Co., Chicago* [*1916*]. *36 pp.*

A pamphlet by the medical director of the Life Saving Devices Co., treating of drowning, electric shock, gas poisoning, etc.

Carnegie Steel Co. *Standardization, surgical technique. Rules for surgeons. 11 pp.*

Eliason, Eldridge L. *First aid in emergencies. Lippincott, Philadelphia and London, 1915. 204 pp.*

Haldy, W. E. *First-aid practice for factory dispensaries, with some health hints for industrial workers. 1914. 95 pp.*

Prepared for the general service department of the national lamp works of the General Electric Co.

Johnson's *First-Aid Manual. Suggestions for prompt aid to the injured in accidents and emergencies. Johnson & Johnson, New Brunswick, N. J., 1912. 143 pp.*

Lynch, Charles. *American National Red Cross text book on first aid and relief columns. Blakiston, Philadelphia, 1916. 247 pp. Price, $1.*

—— *American Red Cross abridged text book on first aid. Industrial edition. Blakiston, Philadelphia. Reprint, 1916. 175 pp. Price, 30 cents.*

—— —— *General edition. Reprint, 1916. 183 pp. Price, 30 cents.*

—— —— *Miners' edition. 186 pp. Price, 30 cents.*

—— —— *Railroad edition. 150 pp. Price, 30 cents.*

—— —— *Carnegie Steel Co. 130 pp.*

FIRST-AID HANDBOOKS—Concluded.

SABLE, DANIEL E. *Vest pocket first aid and safety first.* (*English.*) *National First Aid Publishing Co., Pittsburgh. 1915. 104 pp.*

WELLS, ERNEST A. *Emergency medical and surgical aid. What to do and what not to do. Aetna Life Insurance Co., Hartford, Conn. 1911. 48 pp.*

WISCONSIN INDUSTRIAL COMMISSION. *First aid. A handbook for use in shops. December 1, 1914. 28 pp.*

FRICK, H. C., COKE CO. *Safety first.* (*English.*) *1916. 26 pp.*

A book of precepts and instructions for underground workers in coal mines.

GILBERT, ELEANOR. *The ambitious woman in business. New York, Funk & Wagnalls. 1916. 393 pp. Price, $1.50.*

GRAND INTERNATIONAL BROTHERHOOD OF LOCOMOTIVE ENGINEERS. *Constitution and statutes, revised. Cleveland, Ohio, May, 1915. 157 pp.*

HAINES, EMILY L. *Occupation as a remedial factor in hospitals for the mentally sick. Massachusetts Society for Mental Hygiene. Publication No. 13. 1916. 8 pp. Reprinted from Boston Medical and Surgical Journal, April 27, 1916.*

HART, SCHAFFNER & MARX. *Board of arbitration. The Hart, Schaffner & Marx labor agreement, by J. E. Williams, Chicago. 1916. 41 pp.*

A compilation and codification of the agreements of 1911, 1913, and 1916, and decisions rendered by the board of arbitration.

HONOLULU SOCIAL SURVEY. *Report of committee on the social evil. May, 1914. 40 pp.*

HULL HOUSE YEARBOOK. *Chicago, January 1, 1916. 64 pp. Price, 10 cents.*

Presents not only the current activities of this institution, but also a brief historical account of the foundation and development of each department.

IHLDER, JOHN. *The houses of Providence. Providence, R. I. 1916. 96 pp.*

INSTITUT INTERNATIONAL DE STATISTIQUE. *Annuaire international de statistique. I. Etat de la population* (*Europe*). *1916. 116 pp.*

Report of the permanent office of the International Institute of Statistics on the condition of the population in Europe.

INTERNATIONAL ASSOCIATION OF CASUALTY AND FIRE UNDERWRITERS. *Fifth convention, Detroit, August 24–27, 1915. 180 pp.*

INTERNATIONAL ASSOCIATION OF MACHINISTS. *Proceedings of fifteenth convention. Baltimore, June 26–July 8, 1916. 157 pp.*

INTERNATIONAL LONGSHOREMEN'S ASSOCIATION. *Proceedings of the twenty-third annual convention. Cincinnati, November 8, 1915. 199 pp.*

INTERNATIONAL SLATE AND TILE ROOFERS' UNION OF AMERICA. *Report of proceedings of eleventh annual convention. Pittsburgh, June 5 to 9, 1916. 36 pp.*

JOINT BOARD OF SANITARY CONTROL IN THE CLOAK, SUIT, AND SKIRT INDUSTRIES. *Six years' work and progress. An experiment in industrial self-control. October 31, 1910, to October 31, 1916. 32 pp.*

JOINT CONFERENCE OF COAL OPERATORS AND COAL MINERS OF THE CENTRAL COMPETITIVE FIELD, WESTERN PENNSYLVANIA, OHIO, INDIANA, AND ILLINOIS. *Mobile, Ala., February 8, 1916, and New York, February 24, 1916. 506 pp.*

KENT, A. F. STANLEY. *Second interim report on industrial fatigue. London, 1916. 76 pp.*

For review of this report see p. 97.

LOCOMOTIVE ENGINEERS' MUTUAL LIFE AND ACCIDENT INSURANCE ASSOCIATION, AND ACCIDENT AND INDEMNITY INSURANCE. *Report and financial statement. Cleveland, Ohio, June 30, 1916. 21 pp.*

MACDONALD DIRECTORY OF LABOR ORGANIZATIONS, CHICAGO AND VICINITY, *154 West Randolph Street, Chicago. 1916. 64 pp. Price, $5.*

Contains official wage scales of Chicago trade-unions, 1916; also revised basis for pricing extra work in certain trades.

MANCHESTER, H. H. *The story of silk and Cheney silk. New York, 1916. 63 pp.*

Contains some account of the processes of silk manufacture.

MINE INSPECTORS' INSTITUTE OF THE UNITED STATES OF AMERICA. *Minutes of ninth annual meeting, Joplin, Mo., June 13–15, 1916. 115 pp.*

MINNESOTA AGRICULTURAL EXPERIMENT STATION. *Bulletin 57 (labor requirements of crop production), March, 1916. 55 pp.*

Shows the actual labor requirements of farm crops in terms of hours per acre worked by man and by horse to produce various crops.

NATIONAL ASSOCIATION OF COTTON MANUFACTURERS. *Transactions at the annual meeting, Boston, April 26–27, 1916. 423 pp.*

NATIONAL ASSOCIATION OF MANUFACTURERS. *Proceedings of twenty-first annual convention, New York City, May 15–17, 1916. 340 pp.*

Among the suggestions of committee reports, addresses, and discussions were accident prevention and workmen's compensation, industrial betterment (including minimum wage and sickness insurance), industrial education, and union label.

NATIONAL ASSOCIATION OF MERCHANT TAILORS OF AMERICA. *Official record of the seventh annual convention. St. Louis, Mo., February 8–10, 1916. 77 pp.*

NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS. *First annual report, including seventh annual report of New York State committee for the prevention of blindness. New York, November, 1915. 56 pp.*

NATIONAL FIRE PROTECTION ASSOCIATION (UNITED STATES AND CANADA). *Yearbook, August, 1916. 147 pp.*

NEARING, SCOTT. *Poverty and riches. Philadelphia, Winston, 1916. 261 pp.*

NEDERLANDSCH VERBOND VAN VAKVEREENINGEN. *Zevende verslag van den toestand en de verrichtingen. Januari 1914 tot 31 December 1915. 209 pp.*

Seventh report of the operations of the Netherland Association of Trade Unions.

NOLEN, JOHN. *More houses for Bridgeport. Report to Bridgeport, Conn., Chamber of Commerce. Cambridge, Mass., 1916. 62 pp.*

ORDER OF RAILROAD TELEGRAPHERS. *Constitution revised and amended, St. Louis, Mo., May, 1915. 128 pp.*

ORDER OF RAILWAY CONDUCTORS. *Constitution, statutes, rules of order, and laws governing the mutual benefit department. Revised and adopted St. Louis, May 8, 1916. 142 pp.*

PASSAIC, N. J., BOARD OF TRADE. *Survey of housing conditions in Passaic, March to May, 1915. Prepared for the housing committee of Passaic Board of Trade by Udetta D. Brown, with recommendations prepared by John Ihlder, field secretary, National Housing Association. 48 pp.*

PEASE, EDWARD R. *The history of the Fabian Society, London, Fifield, 1916. 288 pp.*

An account of the origin of the society and its activities during the 30 years of its existence.

PHILADELPHIA BUREAU OF MUNICIPAL RESEARCH. *Comparative salary data, March 1, 1916. 76 pp. Price, 75 cents.*

The data here shown were obtained from the pay rolls of 14 cities in the United States, 48 private establishments in Philadelphia, and from the salary standardizations of 7 American cities.

Post, Louis F. *Ethics of democracy. Third edition. Indianapolis, Bobbs Merrill, 1916. 374 pp.*

Essays by the assistant secretary of the United States Department of Labor, covering a wide range of public questions—labor, trusts, single tax, etc.

Proud, E. Dorothea. *Welfare work; employers' experiments for improving working conditions in factories. London, Bell, 1916. 363 pp.*

For review of this volume see p. 81.

Public Service Corporation of New Jersey. *Welfare committee. Fifth annual report, 1915. 33 pp.*

Deals with the cost of the welfare plan, and gives information regarding accidents, cases handled, employees in service, insurance, deaths by causes and by occupations, sick benefits and causes of disability, and compensation cost of accidents according to occupations and causes.

Robinson, Charles M. *City planning. New York, Putnam, 1916. 344* pp. *Price, $2.50.*

Rubin, W. B. *The toiler in Europe. Cincinnati, Rosenthal, 1916. 362 pp.*

This book, published under the auspices of the International Molders' Union of North America, is intended to be a "popular psychological insight into European labor conditions."

Rose, Mary S. *Feeding the family. New York, Macmillan, 1916. 449 pp.*

A nontechnical account of the way in which modern knowledge of the science of nutrition may be applied in ordinary life. The food needs of different members of the family group are discussed in separate chapters, and many concrete illustrations of food plans and dietaries are given.

Russell Sage Foundation. *Community action through surveys, by Shelby M. Harrison, director, department of service and exhibits. September, 1916. 29 pp.*

A paper presented at the Indianapolis meeting of the National Conference of Charities and Corrections, May, 1916.

Springfield Survey. *Care of mental defectives, the insane, and alcoholics in Springfield, Ill. A study of the National Committee for Mental Hygiene, by W. L. Treadway. New York, Russell Sage Foundation, 1914. 466 pp.*

Toronto Bureau of Municipal Research. *A living wage. Report, 1915. 14 pp.*

Trades and Labor Congress of Canada. *Proceedings of thirty-second annual convention, Toronto, September 25–30, 1916. 200 pp.*

Underwriters' Laboratories. *List of inspected mechanical appliances, July, 1916. 84 pp.*

This list includes (1) fire appliances, (2) gas, oil, and chemical appliances, and (3) safety appliances, the names of firms manufacturing articles which, as a result of examination and test of samples, have received the approval of the laboratories, and are, therefore, permitted to bear its labels. The list also includes certain products of classes at present not included in the system of inspection and labeling at factories, these appearing under trade numbers, catalog numbers, or otherwise.

Wergeland, Agnes M. *A history of the working classes in France. Chicago, University of Chicago Press, 1916. 136 pp.*

A review of Levasseur's history of the working classes and of industry in France before 1789.

WOMEN'S INDUSTRIAL COUNCIL. *Domestic service, by C. V. Butler. London, Bell, 1916. 148 pp.*

This bulletin is based on schedules from employers and servants. It treats of the personal and industrial aspect of domestic service, methods of training, employment agencies, and other related subjects.

WOMEN'S MUNICIPAL LEAGUE OF BOSTON. *Department of housing. Housing conditions of to-day in Boston. Bulletin, February, 1916. 79 pp.*

YOUNG MEN'S CHRISTIAN ASSOCIATION. *Proceedings of the thirty-ninth international convention, Cleveland, Ohio, 1916. 398 pp.*

In connection with other topics considered, addresses were made on the spiritual forces creating and solving modern industrial problems, and the untouched fields and latent forces in industry and commerce and also among immigrants. The permanent committee on vocational training made a report which is discussed at length.

ZENTRALSTELLE SCHWEIZERISCHER ARBEITSÄMTER. *11. Geschäftsbericht, 1915. 36 pp.*

Eleventh report of the operations of the central office of Swiss labor bureaus.

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